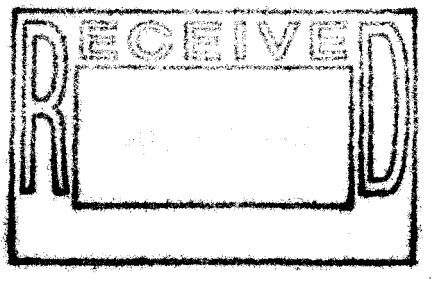
NOTICE

All drawings located at the end of the document.

Data Summary Report
For IHSS Group 500-4

IHSS 500-117.2, Middle Site Chemical Storage

Approval received from the Colorado Department of Public Health and Environment
June 18, 2004.
Approval letter contained in the Administrative Record.



June 2004

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ENCLOSURE

Complete Data Set Compact Disc – Accelerated Action Data

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ACRONYMS

AAESE	Accelerated Action Ecological Screening Evaluation
AL	action level
AR	Administrative Record
ASD	Analytical Services Division
CAS	Chemical Abstracts Service
CD	compact disc
CDPHE	Colorado Department of Public Health and Environment
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COC	contaminant of concern
CRA	Comprehensive Risk Assessment
DOE	U.S. Department of Energy
DQA	Data Quality Assessment
DQO	data quality objective
EPA	U.S. Environmental Protection Agency
ft	foot
ft^2	square foot
FY	Fiscal Year
HPGe	high-purity germanium
HRR	Historical Release Report
IA	Industrial Area
IASAP	Industrial Area Sampling and Analysis Plan
IHSS	Individual Hazardous Substance Site
IM/IRA	Interim Measure/Interim Remedial Action
K-H	Kaiser-Hill Company, L.L.C.
LCS	laboratory control sample
µg/kg	micrograms per kilogram (may be found as ug/kg)
µg/L	micrograms per liter (may be found as ug/L)
mg/kg	milligrams per kilogram
MS	matrix spike
MSD	matrix spike duplicate
NA	not applicable
NFAA	No Further Accelerated Action
PAC	Potential Area of Concern
PAH	polyaromatic hydrocarbon
PARCCS	precision, accuracy, representativeness, completeness, comparability, and sensitivity
pCi/g	picocuries per gram
PCOC	potential contaminant of concern
POE	Point of Evaluation
QC	quality control
RCRA	Resource Conservation and Recovery Act
RFCA	Rocky Flats Cleanup Agreement
RFETS or Site	Rocky Flats Environmental Technology Site
RFI/RI	RCRA Facility Investigation/Remedial Investigation
RIN	report identification number
RISS	Remediation, Industrial Decommissioning and Demolition, and Site Services
RL	reporting limit
RPD	relative percent difference

RSOP	RFCA Standard Operating Protocol
SAP	Sampling and Analysis Plan
SD	standard deviation
SOR	sum of ratios
SSRS	Subsurface Soil Risk Screen
SWD	Soil Water Database
WRW	wildlife refuge worker
VOC	volatile organic compound
V&V	verification and validation

1.0 INTRODUCTION

This Data Summary Report summarizes accelerated action characterization activities conducted at Individual Hazardous Substance Site (IHSS) Group 500-4, consisting of IHSS 500-117.2, at the Rocky Flats Environmental Technology Site (RFETS or Site) in Golden, Colorado.

IHSS Group 500-4 consists solely of IHSS 500-117.2, the Middle Site Chemical Storage area. A general Site location map of IHSS 500-117.2 is shown on Figure 1, and a more detailed location map is shown on Figure 2.

Other IHSS Groups adjacent to IHSS Group 500-4 include (Figure 2) IHSS Groups 500-1 and 500-2. IHSS Group 500-1 consists of IHSS 300-186 (Valve vaults 11, 12, and 13), IHSS 500-197 (Scrap Metal Storage Site), and IHSS 500-117.1 (North Side Chemical Storage Site). IHSS Group 500-1 is currently being sampled for characterization. IHSS 500-2 consists of IHSS 500-158 (Radioactive Site – Building 551). IHSS Group 500-2 has been characterized and is being closed out via a Closeout Report being written concurrently with this IHSS Group 500-4 Data Summary Report.

Potential Area of Concern (PAC) 500-169, which lies within IHSS Group 500-4 (Figure 2), was granted NFAA status by CDPHE.

Characterization activities were planned and executed in accordance with the Industrial Area (IA) Sampling and Analysis Plan (SAP) (IASAP) (DOE 2001) and IASAP Addendum #IA-03-05 (DOE 2003a). The IASAP Addendum was approved by the Colorado Department of Public Health and Environment (CDPHE) on May 5, 2003 (CDPHE 2003). Ecological effects will be evaluated in the Accelerated Action Ecological Screening Evaluation (AAESE) and the ecological risk assessment portion of the Sitewide Comprehensive Risk Assessment (CRA).

Approval of this Data Summary Report constitutes regulatory agency concurrence that IHSS 500-117.2 is a No Further Accelerated Action (NFAA) Site. This information and NFAA determination will be documented in the Fiscal Year (FY) 2004 (04) Historical Release Report (HRR).

2.0 SITE CHARACTERIZATION

IHSS 500-117.2 characterization information consists of historical knowledge, previously collected analytical data, and accelerated action analytical data. Historical information for the IHSS Group was derived from previous studies (DOE 1992-2003, 2000, 2001, 2003a). These data are discussed in Section 2.1.

Accelerated action analytical data for IHSS 500-117.2 are summarized in Section 2.2. A compact disc (CD) is enclosed that contains the accelerated action data, as well as quality control (QC) data, for this project. The CD contains a standardized data set in which analyte names, Chemical Abstracts Service (CAS) numbers, and units are standardized, and derived analytes are provided.

2.1 Historical Information and Data

The Middle Site Chemical Storage area, IHSS 500-117.2, lies east of the former site of Building 551. The IHSS encompasses approximately 93,700 square feet (ft^2). Currently, the IHSS is asphalt-surfaced and is used for the storage of cargo containers.

Minor leaks and spills occurred within the IHSS. Constituents released included acids, oils, soaps, solvents, and beryllium scrap metal. In the early 1970s, a recommendation was made to repack leaking drums in the storage area.

An inspection in approximately 1971 revealed several drums that were leaking an oily substance. On October 20, 1986, a 55-gallon drum of aluminum nitrate was punctured by a forklift east of Building 551. Most of the material flowed out and across the roadway to the east.

Surface soil samples collected during the Operable Unit (OU) 13 Phase I Resource Conservation and Recovery Act (RCRA) Facility Investigation/Remedial Investigation (RFI/RI) indicated that americium-241, plutonium-239/240, radium-226, chromium, lead, nickel, and zinc were present above background levels. These data are available in the IA Data Summary Report (DOE 2000). Acetone, benzene, bromomethane, chloroethane, dichlorodifluoromethane, 1,1-dichloroethene, cis-1,2-dichloroethene, ethylbenzene, naphthalene, n-propylbenzene, tetrachloroethene, trichloroethene, trichlorofluoromethane, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, toluene, vinyl chloride, and xylenes were detected in soil gas samples.

2.2 Accelerated Action Characterization Data

Based on historical sample results from within and around IHSS 500-117.2, IASAP Addendum #IA-03-05 (DOE 2003a) specified that the potential contaminants of concern (PCOCs) for the IHSS were radionuclides, metals, and volatile organic compounds (VOCs).

Accelerated action analytical data for IHSS 500-117.2 were collected in accordance with IASAP Addendum #IA-03-05 (DOE 2003a). Sampling specifications, including PCOCs and media, are presented in Table 1. Deviations from the IASAP Addendum are also presented and explained in Table 1. Table 2 presents a summary of accelerated action sampling and analyses. The locations of samples and analytical results greater than background means plus two standard deviations (SD) or reporting limits (RLs), including Action Level (AL) exceedances, are shown on Figures 3 and 4 and listed in Table 3. Figure 3 presents the analytical data for surface and subsurface soil in the eastern half of the IHSS, and Figure 4 presents surface and subsurface soil data from the western half.

PAC 500-169, which lies within IHSS Group 500-4 (Figure 2), was granted NFAA status by CDPHE with the provision that a search be conducted for a buried metallic object within three feet of the surface (Regulatory Contact Record, February 19, 2004, see Appendix A). (In the Contact Record PAC 500-169 is identified as IHSS 500-169 and IHSS Group 500-1 is cited instead of the correct IHSS Group 500-2.)

The search was conducted on April 19, 2004 (Contact Record April 20, 2004, see Appendix A). Initially coordinates from a previous geophysical survey which identified a potential location for the buried object were relocated. A magnetometer was then employed to locate a second potential site for the object. A Geoprobe was used to core to six feet halfway between the geophysical and magnetometer locations. The core recovery was good, but the core did not contain metallic debris. The geophysical and magnetometer locations where then cored to four feet without finding metallic debris. These locations were about six feet apart. On this basis it was determined that there was no buried object.

2.3 Accelerated Action Exceedances

All Contaminant of Concern (COC) concentrations in IHSS Group 500-4 were less than their wildlife refuge worker WRW ALs, with one exception. The arsenic concentration at location CA41-001 (between 0.5 and 2.1 feet (ft) in depth) was 28 milligrams per kilogram (mg/kg), and the WRW AL is 22.2 mg/kg. Based on the Subsurface Soil Risk Screen (SSRS), the soil with elevated arsenic was not remediated (Section 5.0).

THIS TARGET SHEET REPRESENTS AN OVER-SIZED MAP / PLATE FOR THIS DOCUMENT:
(Ref: 04-RF-00798; KLW-005-04)

Data Summary Report for IHSS Group 500-4 IHSS 500-117.2, Middle Site Chemical Storage

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Figure 3:

IHSS Group 500-4 Accelerated Action Surface and Subsurface Soil Sampling Results Greater than Background Means Plus Two Standard Deviations or Reporting Limits (Eastern Half)

File: W:\Projects\Fy2004\500-4\Closeout\500-4_dsr_mar_jb_052804.apr

June 16, 2004

CERCLA Administrative Record Document, IA-A-002236

U.S. DEPARTEMENT OF ENERGY
ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

GOLDEN, COLORADO

THIS TARGET SHEET REPRESENTS AN OVER-SIZED MAP / PLATE FOR THIS DOCUMENT:
(Ref: 04-RF-00798; KLW-005-04)

Data Summary Report for IHSS Group 500-4 IHSS 500-117.2, Middle Site Chemical Storage

June 2004

Figure 3:

IHSS Group 500-4 Accelerated Action Surface and Subsurface Soil Sampling Results Greater than Background Means Plus Two Standard Deviations or Reporting Limits (Western Half)

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June 16, 2004

CERCLA Administrative Record Document, IA-A-002236

U.S. DEPARTEMENT OF ENERGY
ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

GOLDEN, COLORADO

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Table 1
IHSS Group 500-4 Accelerated Action Characterization Specifications and Sampling Deviations

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analytes	Comments/Deviations
CA39-001-01	2082905.489	749357.702	2082905.650	749362.715	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval, location moved 8 ft north to avoid underground utilities.
CA39-001-01	2082905.489	749357.702	2082905.650	749362.715	Subsurface Soil	0.5-2.5	Radionuclides, Metals	Statistical; no significant difference in interval, location moved 8 ft north to avoid underground utilities.
CA40-000	2082933.825	749379.906	2082933.781	749379.979	Surface Soil	0.25-0.75	Radionuclides, Metals	Statistical; interval adjusted for 3" of asphalt, no significant difference in location.
CA40-000	2082933.825	749379.906	2082933.781	749379.979	Subsurface Soil	0.75-2.75	Radionuclides, Metals	Statistical; interval adjusted for 3" of asphalt, no significant difference in location.
CA40-001	2082928.764	749415.548	2082928.799	749415.514	Surface Soil	0.25-0.75	Radionuclides, Metals	Statistical; interval adjusted for 3" of asphalt, no significant difference in location.
CA40-001	2082928.764	749415.548	2082928.799	749415.514	Subsurface Soil	0.75-2.75	Radionuclides, Metals	Statistical; interval adjusted for 3" of asphalt, no significant difference in location.
CA40-002	2082900.428	749393.344	2082900.334	749393.341	Surface Soil	0.25-0.75	Radionuclides, Metals	Statistical; interval adjusted for 3" of asphalt, no significant difference in location.
CA40-002	2082900.428	749393.344	2082900.334	749393.341	Subsurface Soil	0.75-2.75	Radionuclides, Metals	Statistical; interval adjusted for 3" of asphalt, no significant difference in location.
CA40-003	2082923.703	749451.191	2082923.697	749451.175	Surface Soil	0.25-0.75	Radionuclides, Metals	Statistical; interval adjusted for 3" of asphalt, no significant difference in location.

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analytes	Comments/Deviations
CA40-003	2082923.703	749451.191	2082923.697	749451.175	Subsurface Soil	0.75-2.75	Radionuclides, Metals	Statistical; interval adjusted for 3" of asphalt, no significant difference in location.
CA40-004	2082895.367	749428.987	2082895.352	749429.013	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CA40-004	2082895.367	749428.987	2082895.352	749429.013	Subsurface Soil	0.5-2.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CA40-005	2082918.642	749486.833	2082918.608	749486.782	Surface Soil	0.25-0.75	Radionuclides, Metals	Statistical; interval adjusted for 3" of asphalt, no significant difference in location.
CA40-005	2082918.642	749486.833	2082918.608	749486.782	Subsurface Soil	0.75-2.75	Radionuclides, Metals	Statistical; interval adjusted for 3" of asphalt, no significant difference in location.
CA40-006	2082890.306	749464.629	2082890.296	749464.620	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CA40-006	2082890.306	749464.629	2082890.296	749464.620	Subsurface Soil	0.5-2.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CA40-007	2082913.581	749522.476	2082913.626	749522.473	Surface Soil	0.25-0.75	Radionuclides, Metals	Statistical; interval adjusted for 3" of asphalt, no significant difference in location.
CA40-007	2082913.581	749522.476	2082913.626	749522.473	Subsurface Soil	0.75-2.75	Radionuclides, Metals	Statistical; interval adjusted for 3" of asphalt, no significant difference in location.
CA40-008	2082885.245	749500.272	2082885.246	749500.307	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CA40-008	2082885.245	749500.272	2082885.246	749500.307	Subsurface Soil	0.5-2.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analytes	Comments/Deviations
CA40-009	2082908.520	749558.118	2082908.452	749558.061	Surface Soil	0.25-0.75	Radionuclides, Metals, VOCs	Statistical; VOCs added, interval adjusted for 3" of asphalt, no significant difference in location.
CA40-009	2082908.520	749558.118	2082908.452	749558.061	Subsurface Soil	0.75-2.75	Radionuclides, Metals, VOCs	Statistical; VOCs added, interval adjusted for 3" of asphalt, no significant difference in location.
CA40-009	2082908.520	749558.118	2082908.452	749558.061	Subsurface Soil	2.75-4.75	VOCs	Statistical; "C" interval added and sampled for VOCs because of photoionization detection and staining, interval adjusted for 3" of asphalt, no significant difference in location.
CA40-010	2082880.184	749535.914	2082880.216	749535.896	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CA40-010	2082880.184	749535.914	2082880.216	749535.896	Subsurface Soil	0.5-2.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CA41-000	2082931.796	749615.965	2082931.807	749616.017	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CA41-000	2082931.796	749615.965	2082931.807	749616.017	Subsurface Soil	0.5-2.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CA41-001	2082903.459	749593.761	2082903.526	749593.770	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CA41-001	2082903.459	749593.761	2082903.526	749593.770	Subsurface Soil	0.5-2.1	Radionuclides, Metals	Statistical; interval shortened because of no recovery at 2.1-2.5 ft, no significant difference in location.

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analytes	Comments/Deviations
CA41-002	2082926.735	749651.607	2082926.694	749651.617	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CA41-002	2082926.735	749651.607	2082926.694	749651.617	Subsurface Soil	0.5-1.8	Radionuclides, Metals	Statistical; interval shortened because of no recovery at 1.8-2.5 ft, no significant difference in location.
CA41-003	2082898.398	749629.403	2082898.394	749629.376	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CA41-003	2082898.398	749629.403	2082898.394	749629.376	Subsurface Soil	0.5-2.3	Radionuclides, Metals	Statistical; interval shortened because of no recovery at 2.3-2.5 ft, no significant difference in location.
CA41-004	2082921.674	749687.250	2082921.717	749687.324	Surface Soil	0.3-0.8	Radionuclides, Metals	Statistical; interval adjusted for 4 inches of asphalt, no significant difference in location.
CA41-004	2082921.674	749687.250	2082921.717	749687.324	Subsurface Soil	0.8-2.8	Radionuclides, Metals	Statistical; interval adjusted for 4 inches of asphalt, no significant difference in location.
CA41-005	2082893.337	749665.046	2082893.264	749665.001	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CA41-005	2082893.337	749665.046	2082893.264	749665.001	Subsurface Soil	0.5-2.2	Radionuclides, Metals	Statistical; interval shortened because of no recovery at 2.2-2.5 ft, no significant difference in location.
CA41-006	2082916.613	749722.892	2082916.610	749722.876	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analytes	Comments/Deviations
CA41-006	2082916.613	749722.892	2082916.610	749722.876	Subsurface Soil	0.5-2.0	Radionuclides, Metals	Statistical; interval shortened because of no recovery at 2.0-2.5 ft, no significant difference in location.
CA41-007	2082888.276	749700.688	2082889.170	749701.653	Surface Soil	0.2-0.7	Radionuclides, Metals	Statistical; interval adjusted for 2 inches of asphalt, no significant difference in location.
CA41-007	2082888.276	749700.688	2082889.170	749701.653	Subsurface Soil	0.7-2.7	Radionuclides, Metals	Statistical; interval adjusted for 2 inches of asphalt, no significant difference in location.
CA41-008	2082911.552	749758.535	2082911.627	749758.512	Surface Soil	0.25-0.5	Radionuclides, Metals	Statistical; interval shortened and adjusted due to 3 inches of asphalt, no significant difference in location.
CA41-008	2082911.552	749758.535	2082911.627	749758.512	Subsurface Soil	0.5-2.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CA41-009	2082883.215	749736.331	2082883.196	749736.306	Surface Soil	0.25-0.5	Radionuclides, Metals	Statistical; interval shortened and adjusted due to 3 inches of asphalt, no significant difference in location.
CA41-009	2082883.215	749736.331	2082883.196	749736.306	Subsurface Soil	0.5-2.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CA41-045	2082888.873	749570.772	2082888.960	749570.699	Surface Soil	0.0-0.5	Radionuclides, Metals	Biased to supplement statistical grid, no significant difference in interval and location.
CA41-045	2082888.873	749570.772	2082888.960	749570.699	Subsurface Soil	0.5-2.5	Radionuclides, Metals	Biased to supplement statistical grid, no significant difference in interval and location.

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analytes	Comments/Deviations
CA41-046	2082884.906	749613.415	2082884.935	749613.462	Surface Soil	0.0-0.5	Radionuclides, Metals	Biased to supplement statistical grid, no significant difference in interval and location.
CA41-046	2082884.906	749613.415	2082884.935	749613.462	Subsurface Soil	0.5-2.0	Radionuclides, Metals	Biased to supplement statistical grid, interval shortened because of no recovery at 2.0-2.5 ft, no significant difference in location.
CA42-000	2082934.828	749816.382	2082934.810	749816.476	Surface Soil	0.25-0.5	Radionuclides, Metals	Statistical; interval shortened and adjusted due to 3 inches of asphalt, no significant difference in location.
CA42-000	2082934.828	749816.382	2082934.810	749816.476	Subsurface Soil	0.5-2.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CA42-001	2082906.491	749794.177	2082906.445	749794.186	Surface Soil	0.2-0.5	Radionuclides, Metals	Statistical; interval shortened and adjusted due to 2 inches of asphalt, no significant difference in location.
CA42-001	2082906.491	749794.177	2082906.445	749794.186	Subsurface Soil	0.5-2.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CA42-002	2082929.767	749852.024	2082929.762	749852.002	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CA42-002	2082929.767	749852.024	2082929.762	749852.002	Subsurface Soil	0.5-2.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CA42-003	2082901.430	749829.820	2082901.388	749829.740	Surface Soil	0.25-0.5	Radionuclides, Metals	Statistical; interval shortened and adjusted due to 3 inches of asphalt, no significant difference in location.

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analytes	Comments/Deviations
CA42-003	2082901.430	749829.820	2082901.388	749829.740	Subsurface Soil	0.5-2.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CA42-004	2082924.706	749887.667	2082924.688	749887.651	Surface Soil	0.5-1.0	Radionuclides, Metals	Statistical; interval adjusted for 6 inches of asphalt, no significant difference in location.
CA42-004	2082924.706	749887.667	2082924.688	749887.651	Subsurface Soil	1.0-3.0	Radionuclides, Metals	Statistical; interval adjusted for 6 inches of asphalt, no significant difference in location.
CA42-005	2082896.369	749865.462	2082896.389	749865.482	Surface Soil	0.5-1.0	Radionuclides, Metals	Statistical; interval adjusted for 6 inches of asphalt, no significant difference in location.
CA42-005	2082896.369	749865.462	2082896.389	749865.482	Subsurface Soil	1.0-3.0	Radionuclides, Metals	Statistical; interval adjusted for 6 inches of asphalt, no significant difference in location.
CA42-006	2082891.308	749901.105	2082891.287	749901.148	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CA42-006	2082891.308	749901.105	2082891.287	749901.148	Subsurface Soil	0.5-2.2	Radionuclides, Metals	Statistical; interval shortened because of no recovery at 2.2-2.5 ft, no significant difference in location.
CA42-028	2082891.848	749765.145	2082891.887	749765.153	Surface Soil	0.25-0.5	Radionuclides, Metals	Biased to supplement statistical grid, interval shortened and adjusted due to 3 inches of asphalt, no significant difference in location.

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analytes	Comments/Deviations
CA42-028	2082891.848	749765.145	2082891.887	749765.153	Subsurface Soil	0.5-2.5	Radionuclides, Metals	Biased to supplement statistical grid, no significant difference in interval and location.
CA42-029	2082887.881	749805.805	2082887.944	749805.762	Surface Soil	0.25-0.5	Radionuclides, Metals	Biased to supplement statistical grid, interval shortened and adjusted due to 3 inches of asphalt, no significant difference in location.
CA42-029	2082887.881	749805.805	2082887.944	749805.762	Subsurface Soil	0.5-2.5	Radionuclides, Metals	Biased to supplement statistical grid, no significant difference in interval and location.
CB40-000	2083028.958	749375.234	2083028.962	749375.210	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB40-000	2083028.958	749375.234	2083028.962	749375.210	Subsurface Soil	0.5-2.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB40-001	2083023.897	749410.876	2083023.921	749410.877	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB40-001	2083023.897	749410.876	2083023.921	749410.877	Subsurface Soil	0.5-2.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB40-002	2082995.560	749388.672	2082995.550	749388.658	Surface Soil	0.25-0.75	Radionuclides, Metals	Statistical; interval adjusted for 3 inches of asphalt, no significant difference in location.
CB40-002	2082995.560	749388.672	2082995.550	749388.658	Subsurface Soil	0.75-2.75	Radionuclides, Metals	Statistical; interval adjusted for 3 inches of asphalt, no significant difference in location.

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analytes	Comments/Deviations
CB40-003	2082967.223	749366.468	2082967.222	749366.485	Surface Soil	0.25-0.75	Radionuclides, Metals	Statistical; interval adjusted for 3" of asphalt, no significant difference in location.
CB40-003	2082967.223	749366.468	2082967.222	749366.485	Subsurface Soil	0.75-2.75	Radionuclides, Metals	Statistical; interval adjusted for 3" of asphalt, no significant difference in location.
CB40-004	2083018.836	749446.518	2083014.618	749446.683	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval, location moved 2.5 ft west to avoid underground utilities.
CB40-004	2083018.836	749446.518	2083014.618	749446.683	Subsurface Soil	0.5-2.5	Radionuclides, Metals	Statistical; no significant difference in interval, location moved 2.5 ft west to avoid underground utilities.
CB40-005	2082990.499	749424.314	2082990.471	749424.265	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB40-005	2082990.499	749424.314	2082990.471	749424.265	Subsurface Soil	0.5-2.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB40-006	2082962.162	749402.110	2082962.218	749402.110	Surface Soil	0.25-0.75	Radionuclides, Metals	Statistical; interval adjusted for 3" of asphalt, no significant difference in location.
CB40-006	2082962.162	749402.110	2082962.218	749402.110	Subsurface Soil	0.75-2.75	Radionuclides, Metals	Statistical; interval adjusted for 3" of asphalt, no significant difference in location.
CB40-007	2083042.112	749504.365	2083042.115	749504.427	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB40-007	2083042.112	749504.365	2083042.115	749504.427	Subsurface Soil	0.5-2.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analytes	Comments/Deviations
CB40-008	2083013.775	749482.161	2083011.224	749479.487	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval, location moved 4 ft southwest to avoid underground utilities.
CB40-008	2083013.775	749482.161	2083011.224	749479.487	Subsurface Soil	0.5-2.5	Radionuclides, Metals	Statistical; no significant difference in interval, location moved 4 ft southwest to avoid underground utilities.
CB40-009	2082985.438	749459.957	2082985.382	749459.994	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB40-009	2082985.438	749459.957	2082985.382	749459.994	Subsurface Soil	0.5-2.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB40-010	2082957.101	749437.753	2082957.081	749437.774	Surface Soil	0.25-0.75	Radionuclides, Metals	Statistical; interval adjusted for 3 inches of asphalt, no significant difference in location.
CB40-010	2082957.101	749437.753	2082957.081	749437.774	Subsurface Soil	0.75-2.75	Radionuclides, Metals	Statistical; interval adjusted for 3 inches of asphalt, no significant difference in location.
CB40-011	2083037.051	749540.008	2083037.118	749540.020	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB40-011	2083037.051	749540.008	2083037.118	749540.020	Subsurface Soil	0.5-2.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB40-012	2083008.714	749517.803	2083008.714	749517.788	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analytes	Comments/Deviations
CB40-012	2083008.714	749517.803	2083008.714	749517.788	Subsurface Soil	0.5-2.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB40-013	2082980.377	749495.599	2082980.439	749495.600	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB40-013	2082980.377	749495.599	2082980.439	749495.600	Subsurface Soil	0.5-2.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB40-014	2082952.040	749473.395	2082951.983	749473.404	Surface Soil	0.25-0.75	Radionuclides, Metals	Statistical; interval adjusted for 3 inches of asphalt, no significant difference in location.
CB40-014	2082952.040	749473.395	2082951.983	749473.404	Subsurface Soil	0.75-2.75	Radionuclides, Metals	Statistical; interval adjusted for 3 inches of asphalt, no significant difference in location.
CB40-015	2083003.653	749553.446	2083003.683	749553.391	Surface Soil	0.5-1.0	Radionuclides, Metals	Statistical; interval adjusted for 6 inches of fill, no significant difference in location.
CB40-015	2083003.653	749553.446	2083003.683	749553.391	Subsurface Soil	1.0-3.0	Radionuclides, Metals	Statistical; interval adjusted for 6 inches of fill, no significant difference in location.
CB40-015	2083003.653	749553.446	2083003.683	749553.391	Subsurface Soil	3.0-5.0	Radionuclides, Metals	Statistical; interval adjusted for 6 inches of fill, no significant difference in location.
CB40-016	2082975.316	749531.242	2082975.269	749531.228	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB40-016	2082975.316	749531.242	2082975.269	749531.228	Subsurface Soil	0.5-1.5	Radionuclides, Metals	Statistical; interval shortened because of no recovery at 1.5-2.5 ft, no significant difference in location.

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analytes	Comments/Deviations
CB40-016	2082975.316	749531.242	2082975.269	749531.228	Subsurface Soil	2.5-4.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB40-017	2082946.979	749509.038	2082947.025	749508.980	Surface Soil	0.25-0.75	Radionuclides, Metals	Statistical; interval adjusted for 3 inches of asphalt, no significant difference in location.
CB40-017	2082946.979	749509.038	2082947.025	749508.980	Subsurface Soil	0.75-2.75	Radionuclides, Metals	Statistical; interval adjusted for 3 inches of asphalt, no significant difference in location.
CB40-018	2082941.918	749544.680	2082941.922	749544.674	Surface Soil	0.25-0.75	Radionuclides, Metals	Statistical; interval adjusted for 3 inches of asphalt, no significant difference in location.
CB40-018	2082941.918	749544.680	2082941.922	749544.674	Subsurface Soil	0.75-2.75	Radionuclides, Metals	Statistical; interval adjusted for 3 inches of asphalt, no significant difference in location.
CB41-000	2083031.990	749575.650	2083035.089	749575.907	Surface Soil	0.4-0.9	Radionuclides, Metals	Statistical; interval adjusted for 5 inches of fill, location moved 2 ft east to avoid underground utilities.
CB41-000	2083031.990	749575.650	2083035.089	749575.907	Subsurface Soil	0.9-2.9	Radionuclides, Metals	Statistical; interval adjusted for 5 inches of fill, location moved 2 ft east to avoid underground utilities.
CB41-001	2083026.929	749611.293	2083026.918	749611.293	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB41-001	2083026.929	749611.293	2083026.918	749611.293	Subsurface Soil	0.5-2.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analytes	Comments/Deviations
CB41-002	2082998.592	749589.088	2082998.578	749589.096	Surface Soil	0.25-0.75	Radionuclides, Metals	Statistical; interval adjusted for 3 inches of asphalt, no significant difference in location.
CB41-002	2082998.592	749589.088	2082998.578	749589.096	Subsurface Soil	0.75-2.75	Radionuclides, Metals	Statistical; interval adjusted for 3 inches of asphalt, no significant difference in location.
CB41-003	2082970.255	749566.884	2082970.324	749566.917	Surface Soil	0.5-1.0	Radionuclides, Metals	Statistical; interval adjusted for 6 inches of fill, no significant difference in location.
CB41-003	2082970.255	749566.884	2082970.324	749566.917	Subsurface Soil	1.0-3.0	Radionuclides, Metals	Statistical; interval adjusted for 6 inches of fill, no significant difference in location.
CB41-004	2083021.868	749646.935	2083021.938	749646.936	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB41-004	2083021.868	749646.935	2083021.938	749646.936	Subsurface Soil	0.5-1.5	Radionuclides, Metals	Statistical; interval shortened because of hand auger refusal at 1.5 ft, no significant difference in location.
CB41-005	2082993.531	749624.731	2082993.471	749624.701	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB41-005	2082993.531	749624.731	2082993.471	749624.701	Subsurface Soil	0.5-1.5	Radionuclides, Metals	Statistical; interval shortened because of no recovery at 1.5-2.5 ft, no significant difference in location.
CB41-006	2082965.194	749602.527	2082965.179	749602.470	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analytes	Comments/Deviations
CB41-006	2082965.194	749602.527	2082965.179	749602.470	Subsurface Soil	0.5-2.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB41-007	2082936.857	749580.322	2082936.900	749580.315	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB41-007	2082936.857	749580.322	2082936.900	749580.315	Subsurface Soil	0.5-2.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB41-008	2083016.807	749682.578	2083016.809	749682.624	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB41-008	2083016.807	749682.578	2083016.809	749682.624	Subsurface Soil	0.5-1.2	Radionuclides, Metals	Statistical; interval shortened because of hand auger refusal at 1.2 ft, no significant difference in location.
CB41-009	2082988.470	749660.373	2082988.316	749660.504	Surface Soil	0.25-0.75	Radionuclides, Metals	Statistical; interval adjusted for 3 inches of asphalt, no significant difference in location.
CB41-009	2082988.470	749660.373	2082988.316	749660.504	Subsurface Soil	0.75-2.75	Radionuclides, Metals	Statistical; interval adjusted for 3 inches of asphalt, no significant difference in location.
CB41-010	2082960.133	749638.169	2082960.047	749638.235	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB41-010	2082960.133	749638.169	2082960.047	749638.235	Subsurface Soil	0.5-2.4	Radionuclides, Metals	Statistical; interval shortened because of no recovery at 2.4-2.5 ft, no significant difference in location.

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analytes	Comments/Deviations
CB41-011	2083040.082	749740.424	2083040.143	749740.448	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB41-011	2083040.082	749740.424	2083040.143	749740.448	Subsurface Soil	0.5-1.2	Radionuclides, Metals	Statistical; interval shortened because of hand auger refusal at 1.2 ft, no significant difference in location.
CB41-012	2083011.746	749718.220	2083011.700	749718.200	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB41-012	2083011.746	749718.220	2083011.700	749718.200	Subsurface Soil	0.5-2.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB41-013	2082983.409	749696.016	2082983.355	749696.016	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB41-013	2082983.409	749696.016	2082983.355	749696.016	Subsurface Soil	0.5-1.5	Radionuclides, Metals	Statistical; interval shortened because of no recovery at 1.5-2.5 ft, no significant difference in location.
CB41-014	2082955.072	749673.812	2082955.095	749673.497	Surface Soil	0.25-0.75	Radionuclides, Metals	Statistical; interval adjusted for 3 inches of asphalt, no significant difference in location.
CB41-014	2082955.072	749673.812	2082955.095	749673.497	Subsurface Soil	0.75-2.75	Radionuclides, Metals	Statistical; interval adjusted for 3 inches of asphalt, no significant difference in location.
CB41-015	2083006.685	749753.863	2083006.709	749753.886	Surface Soil	0.25-0.5	Radionuclides, Metals	Statistical; interval adjusted for 3 inches of asphalt, no significant difference in location.

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analytes	Comments/Deviations
CB41-015	2083006.685	749753.863	2083006.709	749753.886	Subsurface Soil	0.5-2.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB41-016	2082978.348	749731.658	2082978.331	749731.698	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB41-016	2082978.348	749731.658	2082978.331	749731.698	Subsurface Soil	0.5-1.3	Radionuclides, Metals	Statistical; interval shortened because of no recovery at 1.3-2.5 ft, no significant difference in location.
CB41-017	2082950.011	749709.454	2082949.995	749709.514	Surface Soil	0.3-0.8	Radionuclides, Metals	Statistical; interval adjusted for 4 inches of asphalt, no significant difference in location.
CB41-017	2082950.011	749709.454	2082949.995	749709.514	Subsurface Soil	0.8-2.8	Radionuclides, Metals	Statistical; interval adjusted for 4 inches of asphalt, no significant difference in location.
CB41-018	2082944.950	749745.097	2082945.045	749745.113	Surface Soil	0.3-0.5	Radionuclides, Metals	Statistical; interval shortened and adjusted due to 4 inches of asphalt, no significant difference in location.
CB41-018	2082944.950	749745.097	2082945.045	749745.113	Subsurface Soil	0.5-2.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB42-000	2083035.021	749776.067	2083034.975	749776.089	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB42-000	2083035.021	749776.067	2083034.975	749776.089	Subsurface Soil	0.5-1.1	Radionuclides, Metals	Statistical; interval shortened because of hand auger refusal at 1.1 ft, no significant difference in location.

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analytes	Comments/Deviations
CB42-001	2083029.960	749811.709	2083038.967	749814.037	Surface Soil	0.3-0.8	Radionuclides, Metals, VOCs	Statistical; interval adjusted for 4 inches of asphalt, location moved 5 ft east to clear overhead power line and culvert.
CB42-001	2083029.960	749811.709	2083038.967	749814.037	Subsurface Soil	0.8-2.8	Radionuclides, Metals, VOCs	Statistical; interval adjusted for 4 inches of asphalt, location moved 5 ft east to clear overhead power line and culvert.
CB42-001	2083029.960	749811.709	2083038.967	749814.037	Subsurface Soil	2.8-4.8	VOCs	Statistical; interval adjusted for 4 inches of asphalt, location moved 5 ft east to clear overhead power line and culvert.
CB42-001	2083029.960	749811.709	2083038.967	749814.037	Subsurface Soil	4.8-6.8	VOCs	Statistical; interval adjusted for 4 inches of asphalt, location moved 5 ft east to clear overhead power line and culvert.
CB42-001	2083029.960	749811.709	2083038.967	749814.037	Subsurface Soil	6.8-8.8	VOCs	Statistical; interval adjusted for 4 inches of asphalt, location moved 5 ft east to clear overhead power line and culvert.
CB42-001	2083029.960	749811.709	2083038.967	749814.037	Subsurface Soil	8.8-10.8	VOCs	Statistical; interval adjusted for 4 inches of asphalt, location moved 5 ft east to clear overhead power line and culvert.

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analytes	Comments/Deviations
CB42-002	2083001.624	749789.505	2083001.627	749789.456	Surface Soil	0.25-0.5	Radionuclides, Metals	Statistical; interval shortened and adjusted due to 3 inches of asphalt, no significant difference in location.
CB42-002	2083001.624	749789.505	2083001.627	749789.456	Subsurface Soil	0.5-2.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB42-003	2082973.287	749767.301	2082973.255	749767.319	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB42-003	2082973.287	749767.301	2082973.255	749767.319	Subsurface Soil	0.5-1.7	Radionuclides, Metals	Statistical; interval shortened because of no recovery at 1.7-2.5 ft, no significant difference in location.
CB42-004	2083024.899	749847.352	2083036.742	749845.349	Surface Soil	0.5-1.0	Radionuclides, Metals, VOCs	Statistical; interval adjusted for 6 inches of asphalt, location moved 12 ft east to clear overhead power line.
CB42-004	2083024.899	749847.352	2083036.742	749845.349	Subsurface Soil	1.0-3.0	Radionuclides, Metals, VOCs	Statistical; interval adjusted for 6 inches of asphalt, location moved 12 ft east to clear overhead power line.
CB42-004	2083024.899	749847.352	2083036.742	749845.349	Subsurface Soil	3.0-5.0	VOCs	Statistical; interval adjusted for 6 inches of asphalt, location moved 12 ft east to clear overhead power line.
CB42-004	2083024.899	749847.352	2083036.742	749845.349	Subsurface Soil	5.0-7.0	VOCs	Statistical; interval adjusted for 6 inches of asphalt, location moved 12 ft east to clear overhead power line.

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analytes	Comments/Deviations
CB42-004	2083024.899	749847.352	2083036.742	749845.349	Subsurface Soil	7.0-9.0	VOCs	Statistical; interval adjusted for 6 inches of asphalt, location moved 12 ft east to clear overhead power line.
CB42-004	2083024.899	749847.352	2083036.742	749845.349	Subsurface Soil	9.0-11.0	VOCs	Statistical; interval adjusted for 6 inches of asphalt, location moved 12 ft east to clear overhead power line.
CB42-005	2082996.563	749825.147	2082996.592	749825.119	Surface Soil	0.3-0.5	Radionuclides, Metals, VOCs	Statistical; interval adjusted for 4 inches of asphalt, no significant difference in location.
CB42-005	2082996.563	749825.147	2082996.592	749825.119	Subsurface Soil	0.5-2.5	Radionuclides, Metals, VOCs	Statistical; no significant difference in interval and location.
CB42-005	2082996.563	749825.147	2082996.592	749825.119	Subsurface Soil	2.5-4.5	VOCs	Statistical; no significant difference in interval and location.
CB42-005	2082996.563	749825.147	2082996.592	749825.119	Subsurface Soil	4.5-6.5	VOCs	Statistical; no significant difference in interval and location.
CB42-005	2082996.563	749825.147	2082996.592	749825.119	Subsurface Soil	6.5-8.5	VOCs	Statistical; no significant difference in interval and location.
CB42-005	2082996.563	749825.147	2082996.592	749825.119	Subsurface Soil	8.5-10.5	VOCs	Statistical; no significant difference in interval and location.
CB42-006	2082968.226	749802.943	2082968.201	749802.896	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analytes	Comments/Deviations
CB42-006	2082968.226	749802.943	2082968.201	749802.896	Subsurface Soil	0.5-2.0	Radionuclides, Metals	Statistical; interval shortened because of no recovery at 2.0-2.5 ft, no significant difference in location.
CB42-007	2082939.889	749780.739	2082939.720	749780.775	Surface Soil	0.0-0.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB42-007	2082939.889	749780.739	2082939.720	749780.775	Subsurface Soil	0.5-2.5	Radionuclides, Metals	Statistical; no significant difference in interval and location.
CB42-008	2083019.838	749882.994	2083008.912	749882.597	Surface Soil	0.25-0.75	Radionuclides, Metals, VOCs	Statistical; interval adjusted for 3 inches of asphalt, location moved 14 ft west to clear overhead power line and underground alarm line.
CB42-008	2083019.838	749882.994	2083008.912	749882.597	Subsurface Soil	0.75-2.75	Radionuclides, Metals, VOCs	Statistical; interval adjusted for 3 inches of asphalt, location moved 14 ft west to clear overhead power line and underground alarm line.
CB42-008	2083019.838	749882.994	2083008.912	749882.597	Subsurface Soil	2.75-4.75	VOCs	Statistical; interval adjusted for 3 inches of asphalt, location moved 14 ft west to clear overhead power line and underground alarm line.
CB42-008	2083019.838	749882.994	2083008.912	749882.597	Subsurface Soil	4.75-6.75	VOCs	Statistical; interval adjusted for 3 inches of asphalt, location moved 14 ft west to clear overhead power line and underground alarm line.

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analytes	Comments/Deviations
CB42-008	2083019.838	749882.994	2083008.912	749882.597	Subsurface Soil	6.75-8.75	VOCs	Statistical; interval adjusted for 3 inches of asphalt, location moved 14 ft west to clear overhead power line and underground alarm line.
CB42-008	2083019.838	749882.994	2083008.912	749882.597	Subsurface Soil	8.75-10.75	VOCs	Statistical; interval adjusted for 3 inches of asphalt, location moved 14 ft west to clear overhead power line and underground alarm line.
CB42-009	2082991.502	749860.790	2082991.520	749860.790	Surface Soil	0.3-0.8	Radionuclides, Metals, VOCs	Statistical; interval adjusted for 4 inches of asphalt, no significant difference in location.
CB42-009	2082991.502	749860.790	2082991.520	749860.790	Subsurface Soil	0.8-2.8	Radionuclides, Metals, VOCs	Statistical; interval adjusted for 4 inches of asphalt, no significant difference in location.
CB42-009	2082991.502	749860.790	2082991.520	749860.790	Subsurface Soil	2.8-4.8	VOCs	Statistical; interval adjusted for 4 inches of asphalt, no significant difference in location.
CB42-009	2082991.502	749860.790	2082991.520	749860.790	Subsurface Soil	4.8-6.8	VOCs	Statistical; interval adjusted for 4 inches of asphalt, no significant difference in location.
CB42-009	2082991.502	749860.790	2082991.520	749860.790	Subsurface Soil	6.8-8.8	VOCs	Statistical; interval adjusted for 4 inches of asphalt, no significant difference in location.

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analytes	Comments/Deviations
CB42-009	2082991.502	749860.790	2082991.520	749860.790	Subsurface Soil	8.8-10.8	VOCs	Statistical; interval adjusted for 4 inches of asphalt, no significant difference in location.
CB42-010	2082963.165	749838.586	2082963.228	749838.538	Surface Soil	0.25-0.5	Radionuclides, Metals	Statistical; interval shortened and adjusted due to 3 inches of asphalt, no significant difference in location. The VOC sample specified in the SAP for this interval was not collected because the location was covered by asphalt.
CB42-010	2082963.165	749838.586	2082963.228	749838.538	Subsurface Soil	0.5-2.5	Radionuclides, Metals, VOCs	Statistical; no significant difference in interval and location.
CB42-010	2082963.165	749838.586	2082963.228	749838.538	Subsurface Soil	2.5-4.5	VOCs	Statistical; no significant difference in interval and location.
CB42-010	2082963.165	749838.586	2082963.228	749838.538	Subsurface Soil	4.5-6.5	VOCs	Statistical; no significant difference in interval and location.
CB42-010	2082963.165	749838.586	2082963.228	749838.538	Subsurface Soil	6.5-8.0	VOCs	Statistical; interval shortened because of no recovery at 8.0-8.5 ft, no significant difference in location.
CB42-010	2082963.165	749838.586	2082963.228	749838.538	Subsurface Soil	9.0-10.5	VOCs	Statistical; gap in interval from at 8.5-9.0 ft, no significant difference in location.
CB42-011	2082986.441	749896.432	2082986.858	749893.542	Surface Soil	0.0-0.5	Radionuclides, Metals, VOCs	Statistical; no significant difference in interval, location moved 2 ft south because of sewer line.

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analytes	Comments/Deviations
CB42-011	2082986.441	749896.432	2082986.858	749893.542	Subsurface Soil	0.5-2.5	Radionuclides, Metals, VOCs	Statistical; no significant difference in interval, location moved 2 ft south because of sewer line.
CB42-011	2082986.441	749896.432	2082986.858	749893.542	Subsurface Soil	2.5-4.0	VOCs	Statistical; interval shortened because of no recovery at 4.0-4.5 ft, location moved 2 ft south because of sewer line.
CB42-011	2082986.441	749896.432	2082986.858	749893.542	Subsurface Soil	4.5-6.5	VOCs	Statistical; no significant difference in interval, location moved 2 ft south because of sewer line.
CB42-011	2082986.441	749896.432	2082986.858	749893.542	Subsurface Soil	6.5-8.5	VOCs	Statistical; no significant difference in interval, location moved 2 ft south because of sewer line.
CB42-011	2082986.441	749896.432	2082986.858	749893.542	Subsurface Soil	8.5-10.5	VOCs	Statistical; no significant difference in interval, location moved 2 ft south because of sewer line.
CB42-012	2082958.104	749874.228	2082958.106	749874.218	Surface Soil	0.3-0.8	Radionuclides, Metals, VOCs	Statistical; interval adjusted for 4 inches of asphalt, no significant difference in location.
CB42-012	2082958.104	749874.228	2082958.106	749874.218	Subsurface Soil	0.8-2.8	Radionuclides, Metals, VOCs	Statistical; interval adjusted for 4 inches of asphalt, no significant difference in location.
CB42-012	2082958.104	749874.228	2082958.106	749874.218	Subsurface Soil	2.8-4.8	VOCs	Statistical; interval adjusted for 4 inches of asphalt, no significant difference in location.

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analytes	Comments/Deviations
CB42-012	2082958.104	749874.228	2082958.106	749874.218	Subsurface Soil	4.8-6.8	VOCs	Statistical; interval adjusted for 4 inches of asphalt, no significant difference in location.
CB42-012	2082958.104	749874.228	2082958.106	749874.218	Subsurface Soil	6.8-8.8	VOCs	Statistical; interval adjusted for 4 inches of asphalt, no significant difference in location.
CB42-012	2082958.104	749874.228	2082958.106	749874.218	Subsurface Soil	8.8-10.8	VOCs	Statistical; interval adjusted for 4 inches of asphalt, no significant difference in location.
CB42-013	2082953.043	749909.871	2082954.028	749907.628	Surface Soil	0.0-0.5	Radionuclides, Metals, VOCs	Statistical; no significant difference in interval, location moved 2 ft south because of sewer line.
CB42-013	2082953.043	749909.871	2082954.028	749907.628	Subsurface Soil	0.5-2.5	Radionuclides, Metals, VOCs	Statistical; no significant difference in interval, location moved 2 ft south because of sewer line.
CB42-013	2082953.043	749909.871	2082954.028	749907.628	Subsurface Soil	2.5-4.5	VOCs	Statistical; no significant difference in interval, location moved 2 ft south because of sewer line.
CB42-013	2082953.043	749909.871	2082954.028	749907.628	Subsurface Soil	4.5-6.5	VOCs	Statistical; no significant difference in interval, location moved 2 ft south because of sewer line.
CB42-013	2082953.043	749909.871	2082954.028	749907.628	Subsurface Soil	6.5-8.5	VOCs	Statistical; no significant difference in interval, location moved 2 ft south because of sewer line.

Location	Planned Easting	Planned Northing	Actual Easting	Actual Northing	Actual Media	Actual Depth Interval (ft)	Actual Analytes	Comments/Deviations
CB42-013	2082953.043	749909.871	2082954.028	749907.628	Subsurface Soil	8.5-10.5	VOCs	Statistical; no significant difference in interval, location moved 2 ft south because of sewer line.

Table 2
IHSS Group 500-4 Accelerated Action Sampling and Analysis Summary

Criteria	Number
Number of Sampling Locations	85
Number of Samples	209
Number of Radionuclide Analyses	172
Number of Metal Analyses	172
Number of VOC Analyses	56

Table 3
IHSS Group 500-4 Accelerated Action Characterization Data Greater Than Background Means Plus Two Standard Deviations or RLs

Location	Actual Easting	Actual Northing	Analyte	Result	Reporting Limit	WRW AL	Background Mean + 2 Standard Deviations	Unit	Start Depth (ft)	End Depth (ft)
CA39-001-01	*2082905.650*	*749362.715*	*Uranium-234*	*3.225*	NA	*300.0*	*2.253*	*pCi/g*	*0*	*0.5*
CA39-001-01	2082905.650	749362.715	Uranium-235	0.264	NA	8.0	0.094	pCi/g	0	0.5
CA39-001-01	2082905.650	749362.715	Uranium-238	3.225	NA	351.0	2.000	pCi/g	0	0.5
CA39-001-01	2082905.650	749362.715	Uranium-235	0.322	NA	8.0	0.120	pCi/g	0.5	2.5
CA39-001-01	2082905.650	749362.715	Uranium-238	2.612	NA	351.0	1.490	pCi/g	0.5	2.5
CA40-000	2082933.781	749379.979	Mercury	0.260	NA	25200.0	0.134	mg/kg	0.25	0.75
CA40-000	2082933.781	749379.979	Uranium-235	0.149	NA	8.0	0.094	pCi/g	0.25	0.75
CA40-000	2082933.781	749379.979	Aluminum	37000.000	NA	228000.0	35373.170	mg/kg	0.75	2.75
CA40-000	*2082933.781*	*749379.979*	*Uranium-234*	*4.908*	NA	*300.0*	*2.640*	*pCi/g*	*0.75*	*2.75*
CA40-000	2082933.781	749379.979	Uranium-235	0.209	NA	8.0	0.120	pCi/g	0.75	2.75
CA40-000	2082933.781	749379.979	Uranium-238	4.908	NA	351.0	1.490	pCi/g	0.75	2.75
CA40-001	2082928.799	749415.514	Aluminum	42000.000	NA	228000.0	16902.000	mg/kg	0.25	0.75
CA40-001	2082928.799	749415.514	Beryllium	1.500	NA	921.0	0.966	mg/kg	0.25	0.75
CA40-001	2082928.799	749415.514	Chromium	36.000	NA	268.0	16.990	mg/kg	0.25	0.75
CA40-001	2082928.799	749415.514	Iron	21000.000	NA	307000.0	18037.000	mg/kg	0.25	0.75
CA40-001	2082928.799	749415.514	Lithium	20.000	NA	20400.0	11.550	mg/kg	0.25	0.75
CA40-001	2082928.799	749415.514	Mercury	0.150	NA	25200.0	0.134	mg/kg	0.25	0.75
CA40-001	2082928.799	749415.514	Nickel	31.000	NA	20400.0	14.910	mg/kg	0.25	0.75
CA40-001	2082928.799	749415.514	Vanadium	50.000	NA	7150.0	45.590	mg/kg	0.25	0.75
CA40-001	2082928.799	749415.514	Uranium-235	0.242	NA	8.0	0.120	pCi/g	0.75	2.75
CA40-002	2082900.334	749393.341	Aluminum	22000.000	NA	228000.0	16902.000	mg/kg	0.25	0.75
CA40-002	2082900.334	749393.341	Arsenic	12.000	NA	22.2	10.090	mg/kg	0.25	0.75
CA40-002	2082900.334	749393.341	Chromium	19.000	NA	268.0	16.990	mg/kg	0.25	0.75
CA40-002	2082900.334	749393.341	Lithium	16.000	NA	20400.0	11.550	mg/kg	0.25	0.75
CA40-002	2082900.334	749393.341	Nickel	18.000	NA	20400.0	14.910	mg/kg	0.25	0.75
CA40-002	*2082900.334*	*749393.341*	*Uranium-234*	*3.054*	NA	*300.0*	*2.253*	*pCi/g*	*0.25*	*0.75*

Location	Actual Easting	Actual Northing	Analyte	Result	Reporting Limit	WRW AL	Background Mean + 2 Standard Deviations	Unit	Start Depth (ft)	End Depth (ft)
CA40-002	2082900.334	749393.341	Uranium-235	0.271	NA	8.0	0.094	pCi/g	0.25	0.75
CA40-002	2082900.334	749393.341	Uranium-238	3.054	NA	351.0	2.000	pCi/g	0.25	0.75
CA40-002	2082900.334	749393.341	Vanadium	54.000	NA	7150.0	45.590	mg/kg	0.25	0.75
CA40-002	2082900.334	749393.341	Aluminum	39000.000	NA	228000.0	35373.170	mg/kg	0.75	2.75
CA40-002	2082900.334	749393.341	Arsenic	22.000	NA	22.2	13.140	mg/kg	0.75	2.75
CA40-002	*2082900.334*	*749393.341*	*Uranium-234*	*5.004*	NA	*300.0*	*2.640*	*pCi/g*	*0.75*	*2.75*
CA40-002	2082900.334	749393.341	Uranium-235	0.232	NA	8.0	0.120	pCi/g	0.75	2.75
CA40-002	2082900.334	749393.341	Uranium-238	5.004	NA	351.0	1.490	pCi/g	0.75	2.75
CA40-003	*2082923.697*	*749451.175*	*Uranium-234*	*4.024*	NA	*300.0*	*2.640*	*pCi/g*	*0.75*	*2.75*
CA40-003	2082923.697	749451.175	Uranium-238	4.024	NA	351.0	1.490	pCi/g	0.75	2.75
CA40-004	2082895.352	749429.013	Aluminum	27000.000	NA	228000.0	16902.000	mg/kg	0	0.5
CA40-004	2082895.352	749429.013	Beryllium	1.100	NA	921.0	0.966	mg/kg	0	0.5
CA40-004	2082895.352	749429.013	Chromium	21.000	NA	268.0	16.990	mg/kg	0	0.5
CA40-004	2082895.352	749429.013	Lithium	15.000	NA	20400.0	11.550	mg/kg	0	0.5
CA40-004	2082895.352	749429.013	Mercury	0.340	NA	25200.0	0.134	mg/kg	0	0.5
CA40-004	2082895.352	749429.013	Nickel	24.000	NA	20400.0	14.910	mg/kg	0	0.5
CA40-004	*2082895.352*	*749429.013*	*Uranium-234*	*4.267*	NA	*300.0*	*2.253*	*pCi/g*	*0*	*0.5*
CA40-004	2082895.352	749429.013	Uranium-235	0.252	NA	8.0	0.094	pCi/g	0	0.5
CA40-004	2082895.352	749429.013	Uranium-238	4.267	NA	351.0	2.000	pCi/g	0	0.5
CA40-004	*2082895.352*	*749429.013*	*Uranium-234*	*4.813*	NA	*300.0*	*2.640*	*pCi/g*	*0.5*	*2.5*
CA40-004	2082895.352	749429.013	Uranium-238	4.813	NA	351.0	1.490	pCi/g	0.5	2.5
CA40-005	2082918.608	749486.782	Aluminum	43000.000	NA	228000.0	16902.000	mg/kg	0.25	0.75
CA40-005	2082918.608	749486.782	Arsenic	12.000	NA	22.2	10.090	mg/kg	0.25	0.75
CA40-005	2082918.608	749486.782	Barium	170.000	NA	26400.0	141.260	mg/kg	0.25	0.75
CA40-005	2082918.608	749486.782	Beryllium	1.600	NA	921.0	0.966	mg/kg	0.25	0.75
CA40-005	2082918.608	749486.782	Chromium	30.000	NA	268.0	16.990	mg/kg	0.25	0.75
CA40-005	2082918.608	749486.782	Copper	22.000	NA	40900.0	18.060	mg/kg	0.25	0.75
CA40-005	2082918.608	749486.782	Iron	23000.000	NA	307000.0	18037.000	mg/kg	0.25	0.75
CA40-005	2082918.608	749486.782	Lithium	28.000	NA	20400.0	11.550	mg/kg	0.25	0.75
CA40-005	2082918.608	749486.782	Mercury	0.160	NA	25200.0	0.134	mg/kg	0.25	0.75

Location	Actual Easting	Actual Northing	Analyte	Result	Reporting Limit	WRW AL	Background Mean + 2 Standard Deviations	Unit	Start Depth (ft)	End Depth (ft)
CA40-005	2082918.608	749486.782	Nickel	33.000	NA	20400.0	14.910	mg/kg	0.25	0.75
CA40-005	2082918.608	749486.782	Strontium	87.000	NA	613000.0	48.940	mg/kg	0.25	0.75
CA40-005	*2082918.608*	*749486.782*	*Uranium-234*	*3.191*	NA	*300.0*	*2.253*	*pCi/g*	*0.25*	*0.75*
CA40-005	2082918.608	749486.782	Uranium-238	3.191	NA	351.0	2.000	pCi/g	0.25	0.75
CA40-005	2082918.608	749486.782	Vanadium	59.000	NA	7150.0	45.590	mg/kg	0.25	0.75
CA40-005	2082918.608	749486.782	Arsenic	16.000	NA	22.2	13.140	mg/kg	0.75	2.75
CA40-005	*2082918.608*	*749486.782*	*Uranium-234*	*5.323*	NA	*300.0*	*2.640*	*pCi/g*	*0.75*	*2.75*
CA40-005	2082918.608	749486.782	Uranium-235	0.171	NA	8.0	0.120	pCi/g	0.75	2.75
CA40-005	2082918.608	749486.782	Uranium-238	5.323	NA	351.0	1.490	pCi/g	0.75	2.75
CA40-006	2082890.296	749464.620	Aluminum	22000.000	NA	228000.0	16902.000	mg/kg	0	0.5
CA40-006	2082890.296	749464.620	Americium-241	0.075	NA	76.0	0.023	pCi/g	0	0.5
CA40-006	2082890.296	749464.620	Chromium	19.000	NA	268.0	16.990	mg/kg	0	0.5
CA40-006	2082890.296	749464.620	Lithium	14.000	NA	20400.0	11.550	mg/kg	0	0.5
CA40-006	2082890.296	749464.620	Nickel	16.000	NA	20400.0	14.910	mg/kg	0	0.5
CA40-006	2082890.296	749464.620	Plutonium-239/240	0.241	NA	50.0	0.066	pCi/g	0	0.5
CA40-007	2082913.626	749522.473	Aluminum	20000.000	NA	228000.0	16902.000	mg/kg	0.25	0.75
CA40-007	2082913.626	749522.473	Chromium	18.000	NA	268.0	16.990	mg/kg	0.25	0.75
CA40-007	2082913.626	749522.473	Lithium	15.000	NA	20400.0	11.550	mg/kg	0.25	0.75
CA40-007	2082913.626	749522.473	Nickel	17.000	NA	20400.0	14.910	mg/kg	0.25	0.75
CA40-007	*2082913.626*	*749522.473*	*Uranium-234*	*3.526*	NA	*300.0*	*2.253*	*pCi/g*	*0.25*	*0.75*
CA40-007	2082913.626	749522.473	Uranium-235	0.252	NA	8.0	0.094	pCi/g	0.25	0.75
CA40-007	2082913.626	749522.473	Uranium-238	3.526	NA	351.0	2.000	pCi/g	0.25	0.75
CA40-007	2082913.626	749522.473	Uranium-238	1.602	NA	351.0	1.490	pCi/g	0.75	2.75
CA40-008	2082885.246	749500.307	Aluminum	21000.000	NA	228000.0	16902.000	mg/kg	0	0.5
CA40-008	2082885.246	749500.307	Chromium	17.000	NA	268.0	16.990	mg/kg	0	0.5
CA40-008	2082885.246	749500.307	Lithium	13.000	NA	20400.0	11.550	mg/kg	0	0.5
CA40-008	2082885.246	749500.307	Mercury	0.460	NA	25200.0	0.134	mg/kg	0	0.5
CA40-008	2082885.246	749500.307	Nickel	16.000	NA	20400.0	14.910	mg/kg	0	0.5
CA40-008	2082885.246	749500.307	Uranium-235	0.178	NA	8.0	0.120	pCi/g	0.5	2.5
CA40-009	2082908.452	749558.061	Aluminum	48000.000	NA	228000.0	16902.000	mg/kg	0.25	0.75

Location	Actual Easting	Actual Northing	Analyte	Result	Reporting Limit	WRW AL	Background Mean + 2 Standard Deviations	Unit	Start Depth (ft)	End Depth (ft)
CA40-009	2082908.452	749558.061	Arsenic	15.000	NA	22.2	10.090	mg/kg	0.25	0.75
CA40-009	2082908.452	749558.061	Barium	150.000	NA	26400.0	141.260	mg/kg	0.25	0.75
CA40-009	2082908.452	749558.061	Beryllium	2.100	NA	921.0	0.966	mg/kg	0.25	0.75
CA40-009	2082908.452	749558.061	Chromium	34.000	NA	268.0	16.990	mg/kg	0.25	0.75
CA40-009	2082908.452	749558.061	Iron	25000.000	NA	307000.0	18037.000	mg/kg	0.25	0.75
CA40-009	2082908.452	749558.061	Lithium	22.000	NA	20400.0	11.550	mg/kg	0.25	0.75
CA40-009	2082908.452	749558.061	Naphthalene	32.500	5.650	3090000.0	NA	ug/kg	0.25	0.75
CA40-009	2082908.452	749558.061	Nickel	41.000	NA	20400.0	14.910	mg/kg	0.25	0.75
CA40-009	2082908.452	749558.061	Vanadium	70.000	NA	7150.0	45.590	mg/kg	0.25	0.75
CA40-009	2082908.452	749558.061	Naphthalene	21.300	5.300	3090000.0	NA	ug/kg	0.75	2.75
CA40-010	2082880.216	749535.896	Chromium	20.000	NA	268.0	16.990	mg/kg	0	0.5
CA40-010	2082880.216	749535.896	Uranium-235	0.227	NA	8.0	0.094	pCi/g	0	0.5
CA40-010	2082880.216	749535.896	Americium-241	0.077	NA	76.0	0.020	pCi/g	0.5	2.5
CA40-010	2082880.216	749535.896	Plutonium-239/240	0.317	NA	50.0	0.020	pCi/g	0.5	2.5
CA41-000	2082931.807	749616.017	Aluminum	30000.000	NA	228000.0	16902.000	mg/kg	0	0.5
CA41-000	2082931.807	749616.017	Antimony	0.720	NA	409.0	0.470	mg/kg	0	0.5
CA41-000	2082931.807	749616.017	Arsenic	11.000	NA	22.2	10.090	mg/kg	0	0.5
CA41-000	2082931.807	749616.017	Beryllium	1.600	NA	921.0	0.966	mg/kg	0	0.5
CA41-000	2082931.807	749616.017	Chromium	31.000	NA	268.0	16.990	mg/kg	0	0.5
CA41-000	2082931.807	749616.017	Lithium	17.000	NA	20400.0	11.550	mg/kg	0	0.5
CA41-000	2082931.807	749616.017	Nickel	26.000	NA	20400.0	14.910	mg/kg	0	0.5
CA41-000	*2082931.807*	*749616.017*	*Uranium-234*	*5.496*	NA	*300.0*	*2.253*	*pCi/g*	*0*	*0.5*
CA41-000	2082931.807	749616.017	Uranium-235	0.173	NA	8.0	0.094	pCi/g	0	0.5
CA41-000	2082931.807	749616.017	Uranium-238	5.496	NA	351.0	2.000	pCi/g	0	0.5
CA41-000	2082931.807	749616.017	Vanadium	63.000	NA	7150.0	45.590	mg/kg	0	0.5
CA41-000	*2082931.807*	*749616.017*	*Uranium-234*	*4.982*	NA	*300.0*	*2.640*	*pCi/g*	*0.5*	*2.5*
CA41-000	2082931.807	749616.017	Uranium-235	0.228	NA	8.0	0.120	pCi/g	0.5	2.5
CA41-000	2082931.807	749616.017	Uranium-238	4.982	NA	351.0	1.490	pCi/g	0.5	2.5
CA41-001	2082903.526	749593.770	Aluminum	17000.000	NA	228000.0	16902.000	mg/kg	0	0.5
CA41-001	2082903.526	749593.770	Lithium	12.000	NA	20400.0	11.550	mg/kg	0	0.5

Location	Actual Easting	Actual Northing	Analyte	Result	Reporting Limit	WRW AL	Background Mean + 2 Standard Deviations	Unit	Start Depth (ft)	End Depth (ft)
CA41-001	2082903.526	749593.770	Mercury	0.200	NA	25200.0	0.134	mg/kg	0	0.5
CA41-001	*2082903.526*	*749593.770*	*Uranium-234*	*5.735*	NA	*300.0*	*2.253*	*pCi/g*	*0*	*0.5*
CA41-001	2082903.526	749593.770	Uranium-235	0.308	NA	8.0	0.094	pCi/g	0	0.5
CA41-001	2082903.526	749593.770	Uranium-238	5.735	NA	351.0	2.000	pCi/g	0	0.5
CA41-001	**2082903.526**	**749593.770**	**Arsenic**	**28.000**	NA	**22.2**	**13.140**	**mg/kg**	**0.5**	**2.1**
CA41-001	2082903.526	749593.770	Chromium	160.000	NA	268.0	68.270	mg/kg	0.5	2.1
CA41-001	2082903.526	749593.770	Copper	300.000	NA	40900.0	38.210	mg/kg	0.5	2.1
CA41-001	2082903.526	749593.770	Manganese	1000.000	NA	3480.0	901.620	mg/kg	0.5	2.1
CA41-001	2082903.526	749593.770	Nickel	160.000	NA	20400.0	62.210	mg/kg	0.5	2.1
CA41-001	2082903.526	749593.770	Uranium, Total	3.400	NA	2750.0	3.040	mg/kg	0.5	2.1
CA41-001	*2082903.526*	*749593.770*	*Uranium-234*	*3.917*	NA	*300.0*	*2.640*	*pCi/g*	*0.5*	*2.1*
CA41-001	2082903.526	749593.770	Uranium-235	0.257	NA	8.0	0.120	pCi/g	0.5	2.1
CA41-001	2082903.526	749593.770	Uranium-238	3.917	NA	351.0	1.490	pCi/g	0.5	2.1
CA41-003	2082898.394	749629.376	Aluminum	21000.000	NA	228000.0	16902.000	mg/kg	0	0.5
CA41-003	2082898.394	749629.376	Chromium	43.000	NA	268.0	16.990	mg/kg	0	0.5
CA41-003	2082898.394	749629.376	Lithium	13.000	NA	20400.0	11.550	mg/kg	0	0.5
CA41-003	2082898.394	749629.376	Nickel	26.000	NA	20400.0	14.910	mg/kg	0	0.5
CA41-003	*2082898.394*	*749629.376*	*Uranium-234*	*4.766*	NA	*300.0*	*2.253*	*pCi/g*	*0*	*0.5*
CA41-003	2082898.394	749629.376	Uranium-235	0.313	NA	8.0	0.094	pCi/g	0	0.5
CA41-003	2082898.394	749629.376	Uranium-238	4.766	NA	351.0	2.000	pCi/g	0	0.5
CA41-003	*2082898.394*	*749629.376*	*Uranium-234*	*3.755*	NA	*300.0*	*2.640*	*pCi/g*	*0.5*	*2.3*
CA41-003	2082898.394	749629.376	Uranium-235	0.229	NA	8.0	0.120	pCi/g	0.5	2.3
CA41-003	2082898.394	749629.376	Uranium-238	3.755	NA	351.0	1.490	pCi/g	0.5	2.3
CA41-004	2082921.717	749687.324	Americium-241	1.210	NA	76.0	0.020	pCi/g	0.8	2.8
CA41-004	2082921.717	749687.324	Plutonium-239/240	10.800	NA	50.0	0.020	pCi/g	0.8	2.8
CA41-005	2082893.264	749665.001	Aluminum	24000.000	NA	228000.0	16902.000	mg/kg	0	0.5
CA41-005	2082893.264	749665.001	Antimony	0.610	NA	409.0	0.470	mg/kg	0	0.5
CA41-005	2082893.264	749665.001	Beryllium	1.000	NA	921.0	0.966	mg/kg	0	0.5
CA41-005	2082893.264	749665.001	Chromium	20.000	NA	268.0	16.990	mg/kg	0	0.5
CA41-005	2082893.264	749665.001	Iron	19000.000	NA	307000.0	18037.000	mg/kg	0	0.5

Location	Actual Easting	Actual Northing	Analyte	Result	Reporting Limit	WRW AL	Background Mean + 2 Standard Deviations	Unit	Start Depth (ft)	End Depth (ft)
CA41-005	2082893.264	749665.001	Lithium	15.000	NA	20400.0	11.550	mg/kg	0	0.5
CA41-005	2082893.264	749665.001	Nickel	18.000	NA	20400.0	14.910	mg/kg	0	0.5
CA41-005	*2082893.264*	*749665.001*	*Uranium-234*	*3.862*	NA	*300.0*	*2.253*	*pCi/g*	*0*	*0.5*
CA41-005	2082893.264	749665.001	Uranium-235	0.271	NA	8.0	0.094	pCi/g	0	0.5
CA41-005	2082893.264	749665.001	Uranium-238	3.862	NA	351.0	2.000	pCi/g	0	0.5
CA41-005	*2082893.264*	*749665.001*	*Uranium-234*	*3.300*	NA	*300.0*	*2.640*	*pCi/g*	*0.5*	*2.2*
CA41-005	2082893.264	749665.001	Uranium-235	0.178	NA	8.0	0.120	pCi/g	0.5	2.2
CA41-005	2082893.264	749665.001	Uranium-238	3.300	NA	351.0	1.490	pCi/g	0.5	2.2
CA41-006	*2082916.610*	*749722.876*	*Uranium-234*	*4.625*	NA	*300.0*	*2.253*	*pCi/g*	*0*	*0.5*
CA41-006	2082916.610	749722.876	Uranium-235	0.281	NA	8.0	0.094	pCi/g	0	0.5
CA41-006	2082916.610	749722.876	Uranium-238	4.625	NA	351.0	2.000	pCi/g	0	0.5
CA41-006	*2082916.610*	*749722.876*	*Uranium-234*	*4.280*	NA	*300.0*	*2.640*	*pCi/g*	*0.5*	*2*
CA41-006	2082916.610	749722.876	Uranium-235	0.246	NA	8.0	0.120	pCi/g	0.5	2
CA41-006	2082916.610	749722.876	Uranium-238	4.280	NA	351.0	1.490	pCi/g	0.5	2
CA41-007	2082889.170	749701.653	Aluminum	19000.000	NA	228000.0	16902.000	mg/kg	0.2	0.7
CA41-007	2082889.170	749701.653	Chromium	18.000	NA	268.0	16.990	mg/kg	0.2	0.7
CA41-007	2082889.170	749701.653	Lithium	13.000	NA	20400.0	11.550	mg/kg	0.2	0.7
CA41-007	2082889.170	749701.653	Nickel	16.000	NA	20400.0	14.910	mg/kg	0.2	0.7
CA41-007	2082889.170	749701.653	Lead	51.000	NA	1000.0	24.970	mg/kg	0.7	2.7
CA41-007	*2082889.170*	*749701.653*	*Uranium-234*	*5.119*	NA	*300.0*	*2.640*	*pCi/g*	*0.7*	*2.7*
CA41-007	2082889.170	749701.653	Uranium-238	5.119	NA	351.0	1.490	pCi/g	0.7	2.7
CA41-007	2082889.170	749701.653	Zinc	400.000	NA	307000.0	139.100	mg/kg	0.7	2.7
CA41-008	2082911.627	749758.512	Aluminum	18000.000	NA	228000.0	16902.000	mg/kg	0.25	0.5
CA41-008	2082911.627	749758.512	Chromium	19.000	NA	268.0	16.990	mg/kg	0.25	0.5
CA41-008	2082911.627	749758.512	Nickel	15.000	NA	20400.0	14.910	mg/kg	0.25	0.5
CA41-008	2082911.627	749758.512	Plutonium-239/240	0.673	NA	50.0	0.066	pCi/g	0.25	0.5
CA41-008	2082911.627	749758.512	Aluminum	44000.000	NA	228000.0	35373.170	mg/kg	0.5	2.5
CA41-008	2082911.627	749758.512	Arsenic	14.000	NA	22.2	13.140	mg/kg	0.5	2.5
CA41-009	2082883.196	749736.306	Nickel	15.000	NA	20400.0	14.910	mg/kg	0.25	0.5
CA41-009	*2082883.196*	*749736.306*	*Uranium-234*	*2.996*	NA	*300.0*	*2.253*	*pCi/g*	*0.25*	*0.5*

Location	Actual Easting	Actual Northing	Analyte	Result	Reporting Limit	WRW AL	Background Mean + 2 Standard Deviations	Unit	Start Depth (ft)	End Depth (ft)
CA41-009	2082883.196	749736.306	Uranium-235	0.163	NA	8.0	0.094	pCi/g	0.25	0.5
CA41-009	2082883.196	749736.306	Uranium-238	2.996	NA	351.0	2.000	pCi/g	0.25	0.5
CA41-009	*2082883.196*	*749736.306*	*Uranium-234*	*3.276*	NA	*300.0*	*2.640*	*pCi/g*	*0.5*	*2.5*
CA41-009	2082883.196	749736.306	Uranium-235	0.184	NA	8.0	0.120	pCi/g	0.5	2.5
CA41-009	2082883.196	749736.306	Uranium-238	3.276	NA	351.0	1.490	pCi/g	0.5	2.5
CA41-045	2082888.960	749570.699	Aluminum	53000.000	NA	228000.0	16902.000	mg/kg	0	0.5
CA41-045	2082888.960	749570.699	Arsenic	16.000	NA	22.2	10.090	mg/kg	0	0.5
CA41-045	2082888.960	749570.699	Barium	160.000	NA	26400.0	141.260	mg/kg	0	0.5
CA41-045	2082888.960	749570.699	Beryllium	2.400	NA	921.0	0.966	mg/kg	0	0.5
CA41-045	2082888.960	749570.699	Chromium	44.000	NA	268.0	16.990	mg/kg	0	0.5
CA41-045	2082888.960	749570.699	Cobalt	12.000	NA	1550.0	10.910	mg/kg	0	0.5
CA41-045	2082888.960	749570.699	Copper	19.000	NA	40900.0	18.060	mg/kg	0	0.5
CA41-045	2082888.960	749570.699	Iron	31000.000	NA	307000.0	18037.000	mg/kg	0	0.5
CA41-045	2082888.960	749570.699	Lithium	27.000	NA	20400.0	11.550	mg/kg	0	0.5
CA41-045	2082888.960	749570.699	Nickel	41.000	NA	20400.0	14.910	mg/kg	0	0.5
CA41-045	2082888.960	749570.699	Plutonium-239/240	0.680	NA	50.0	0.066	pCi/g	0	0.5
CA41-045	2082888.960	749570.699	Vanadium	82.000	NA	7150.0	45.590	mg/kg	0	0.5
CA41-045	2082888.960	749570.699	Plutonium-239/240	1.040	NA	50.0	0.020	pCi/g	0.5	2.5
CA41-046	2082884.935	749613.462	Aluminum	17000.000	NA	228000.0	16902.000	mg/kg	0	0.5
CA41-046	2082884.935	749613.462	Chromium	17.000	NA	268.0	16.990	mg/kg	0	0.5
CA41-046	2082884.935	749613.462	Lithium	12.000	NA	20400.0	11.550	mg/kg	0	0.5
CA42-000	2082934.810	749816.476	Lead	26.000	NA	1000.0	24.970	mg/kg	0.5	2.5
CA42-000	*2082934.810*	*749816.476*	*Uranium-234*	*3.107*	NA	*300.0*	*2.640*	*pCi/g*	*0.5*	*2.5*
CA42-000	2082934.810	749816.476	Uranium-235	0.226	NA	8.0	0.120	pCi/g	0.5	2.5
CA42-000	2082934.810	749816.476	Uranium-238	3.107	NA	351.0	1.490	pCi/g	0.5	2.5
CA42-001	2082906.445	749794.186	Nickel	30.000	NA	20400.0	14.910	mg/kg	0.2	0.5
CA42-001	*2082906.445*	*749794.186*	*Uranium-234*	*3.976*	NA	*300.0*	*2.253*	*pCi/g*	*0.2*	*0.5*
CA42-001	2082906.445	749794.186	Uranium-235	0.252	NA	8.0	0.094	pCi/g	0.2	0.5
CA42-001	2082906.445	749794.186	Uranium-238	3.976	NA	351.0	2.000	pCi/g	0.2	0.5
CA42-002	2082929.762	749852.002	Antimony	0.520	NA	409.0	0.470	mg/kg	0	0.5

Location	Actual Easting	Actual Northing	Analyte	Result	Reporting Limit	WRW AL	Background Mean + 2 Standard Deviations	Unit	Start Depth (ft)	End Depth (ft)
CA42-002	2082929.762	749852.002	Chromium	48.000	NA	268.0	16.990	mg/kg	0	0.5
CA42-002	2082929.762	749852.002	Nickel	26.000	NA	20400.0	14.910	mg/kg	0	0.5
CA42-002	2082929.762	749852.002	Zinc	97.000	NA	307000.0	73.760	mg/kg	0	0.5
CA42-003	2082901.388	749829.740	Mercury	0.230	NA	25200.0	0.134	mg/kg	0.25	0.5
CA42-003	2082901.388	749829.740	Uranium-238	2.020	NA	351.0	2.000	pCi/g	0.25	0.5
CA42-005	*2082896.389*	*749865.482*	*Uranium-234*	*2.361*	NA	*300.0*	*2.253*	*pCi/g*	*0.5*	*1*
CA42-005	2082896.389	749865.482	Uranium-238	2.361	NA	351.0	2.000	pCi/g	0.5	1
CA42-005	*2082896.389*	*749865.482*	*Uranium-234*	*4.032*	NA	*300.0*	*2.640*	*pCi/g*	*1*	*3*
CA42-005	2082896.389	749865.482	Uranium-235	0.246	NA	8.0	0.120	pCi/g	1	3
CA42-005	2082896.389	749865.482	Uranium-238	4.032	NA	351.0	1.490	pCi/g	1	3
CA42-006	2082891.287	749901.148	Aluminum	17000.000	NA	228000.0	16902.000	mg/kg	0	0.5
CA42-006	2082891.287	749901.148	Chromium	17.000	NA	268.0	16.990	mg/kg	0	0.5
CA42-006	2082891.287	749901.148	Plutonium-239/240	0.146	NA	50.0	0.020	pCi/g	0.5	2.2
CA42-028	2082891.887	749765.153	Lithium	14.000	NA	20400.0	11.550	mg/kg	0.25	0.5
CA42-028	2082891.887	749765.153	Uranium-235	0.139	NA	8.0	0.094	pCi/g	0.25	0.5
CA42-028	2082891.887	749765.153	Uranium-235	0.137	NA	8.0	0.120	pCi/g	0.5	2.5
CA42-029	2082887.944	749805.762	Chromium	18.000	NA	268.0	16.990	mg/kg	0.25	0.5
CA42-029	2082887.944	749805.762	Nickel	17.000	NA	20400.0	14.910	mg/kg	0.25	0.5
CA42-029	2082887.944	749805.762	Uranium-235	0.183	NA	8.0	0.094	pCi/g	0.25	0.5
CA42-029	2082887.944	749805.762	Uranium-235	0.157	NA	8.0	0.120	pCi/g	0.5	2.5
CB40-000	2083028.962	749375.210	Uranium-238	2.154	NA	351.0	1.490	pCi/g	0.5	2.5
CB40-001	2083023.921	749410.877	Aluminum	23000.000	NA	228000.0	16902.000	mg/kg	0	0.5
CB40-001	2083023.921	749410.877	Chromium	21.000	NA	268.0	16.990	mg/kg	0	0.5
CB40-001	2083023.921	749410.877	Lithium	16.000	NA	20400.0	11.550	mg/kg	0	0.5
CB40-001	2083023.921	749410.877	Nickel	18.000	NA	20400.0	14.910	mg/kg	0	0.5
CB40-001	2083023.921	749410.877	Uranium-235	0.193	NA	8.0	0.094	pCi/g	0	0.5
CB40-001	2083023.921	749410.877	Aluminum	58000.000	NA	228000.0	35373.170	mg/kg	0.5	2.5
CB40-001	2083023.921	749410.877	Arsenic	15.000	NA	22.2	13.140	mg/kg	0.5	2.5
CB40-001	*2083023.921*	*749410.877*	*Uranium-234*	*4.316*	NA	*300.0*	*2.640*	*pCi/g*	*0.5*	*2.5*
CB40-001	2083023.921	749410.877	Uranium-238	4.316	NA	351.0	1.490	pCi/g	0.5	2.5

Location	Actual Easting	Actual Northing	Analyte	Result	Reporting Limit	WRW AL	Background Mean + 2 Standard Deviations	Unit	Start Depth (ft)	End Depth (ft)
CB40-002	2082995.550	749388.658	Aluminum	72000.000	NA	228000.0	16902.000	mg/kg	0.25	0.75
CB40-002	2082995.550	749388.658	Arsenic	17.000	NA	22.2	10.090	mg/kg	0.25	0.75
CB40-002	2082995.550	749388.658	Barium	200.000	NA	26400.0	141.260	mg/kg	0.25	0.75
CB40-002	2082995.550	749388.658	Beryllium	2.900	NA	921.0	0.966	mg/kg	0.25	0.75
CB40-002	2082995.550	749388.658	Chromium	56.000	NA	268.0	16.990	mg/kg	0.25	0.75
CB40-002	2082995.550	749388.658	Cobalt	12.000	NA	1550.0	10.910	mg/kg	0.25	0.75
CB40-002	2082995.550	749388.658	Copper	23.000	NA	40900.0	18.060	mg/kg	0.25	0.75
CB40-002	2082995.550	749388.658	Iron	39000.000	NA	307000.0	18037.000	mg/kg	0.25	0.75
CB40-002	2082995.550	749388.658	Lithium	43.000	NA	20400.0	11.550	mg/kg	0.25	0.75
CB40-002	2082995.550	749388.658	Mercury	0.190	NA	25200.0	0.134	mg/kg	0.25	0.75
CB40-002	2082995.550	749388.658	Nickel	46.000	NA	20400.0	14.910	mg/kg	0.25	0.75
CB40-002	*2082995.550*	*749388.658*	*Uranium-234*	*2.693*	NA	*300.0*	*2.253*	*pCi/g*	*0.25*	*0.75*
CB40-002	2082995.550	749388.658	Uranium-235	0.209	NA	8.0	0.094	pCi/g	0.25	0.75
CB40-002	2082995.550	749388.658	Uranium-238	2.693	NA	351.0	2.000	pCi/g	0.25	0.75
CB40-002	2082995.550	749388.658	Vanadium	100.000	NA	7150.0	45.590	mg/kg	0.25	0.75
CB40-002	2082995.550	749388.658	Uranium-238	1.551	NA	351.0	1.490	pCi/g	0.75	2.75
CB40-003	2082967.222	749366.485	Aluminum	44000.000	NA	228000.0	16902.000	mg/kg	0.25	0.75
CB40-003	2082967.222	749366.485	Arsenic	18.000	NA	22.2	10.090	mg/kg	0.25	0.75
CB40-003	2082967.222	749366.485	Beryllium	1.600	NA	921.0	0.966	mg/kg	0.25	0.75
CB40-003	2082967.222	749366.485	Chromium	35.000	NA	268.0	16.990	mg/kg	0.25	0.75
CB40-003	2082967.222	749366.485	Iron	25000.000	NA	307000.0	18037.000	mg/kg	0.25	0.75
CB40-003	2082967.222	749366.485	Lithium	28.000	NA	20400.0	11.550	mg/kg	0.25	0.75
CB40-003	2082967.222	749366.485	Nickel	34.000	NA	20400.0	14.910	mg/kg	0.25	0.75
CB40-003	*2082967.222*	*749366.485*	*Uranium-234*	*4.391*	NA	*300.0*	*2.253*	*pCi/g*	*0.25*	*0.75*
CB40-003	2082967.222	749366.485	Uranium-238	4.391	NA	351.0	2.000	pCi/g	0.25	0.75
CB40-003	2082967.222	749366.485	Vanadium	78.000	NA	7150.0	45.590	mg/kg	0.25	0.75
CB40-003	2082967.222	749366.485	Aluminum	36000.000	NA	228000.0	35373.170	mg/kg	0.75	2.75
CB40-003	*2082967.222*	*749366.485*	*Uranium-234*	*4.602*	NA	*300.0*	*2.640*	*pCi/g*	*0.75*	*2.75*
CB40-003	2082967.222	749366.485	Uranium-238	4.602	NA	351.0	1.490	pCi/g	0.75	2.75
CB40-004	*2083014.618*	*749446.683*	*Uranium-234*	*4.927*	NA	*300.0*	*2.253*	*pCi/g*	*0*	*0.5*

Location	Actual Easting	Actual Northing	Analyte	Result	Reporting Limit	WRW AL	Background Mean + 2 Standard Deviations	Unit	Start Depth (ft)	End Depth (ft)
CB40-004	2083014.618	749446.683	Uranium-235	0.275	NA	8.0	0.094	pCi/g	0	0.5
CB40-004	2083014.618	749446.683	Uranium-238	4.927	NA	351.0	2.000	pCi/g	0	0.5
CB40-004	2083014.618	749446.683	Zinc	180.000	NA	307000.0	73.760	mg/kg	0	0.5
CB40-005	*2082990.471*	*749424.265*	*Uranium-234*	*3.589*	NA	*300.0*	*2.253*	*pCi/g*	*0*	*0.5*
CB40-005	2082990.471	749424.265	Uranium-238	3.589	NA	351.0	2.000	pCi/g	0	0.5
CB40-005	2082990.471	749424.265	Aluminum	73000.000	NA	228000.0	35373.170	mg/kg	0.5	2.5
CB40-005	2082990.471	749424.265	Arsenic	18.000	NA	22.2	13.140	mg/kg	0.5	2.5
CB40-005	2082990.471	749424.265	Lithium	41.000	NA	20400.0	34.660	mg/kg	0.5	2.5
CB40-005	2082990.471	749424.265	Uranium-238	1.792	NA	351.0	1.490	pCi/g	0.5	2.5
CB40-005	2082990.471	749424.265	Vanadium	100.000	NA	7150.0	88.490	mg/kg	0.5	2.5
CB40-006	2082962.218	749402.110	Aluminum	48000.000	NA	228000.0	16902.000	mg/kg	0.25	0.75
CB40-006	2082962.218	749402.110	Arsenic	12.000	NA	22.2	10.090	mg/kg	0.25	0.75
CB40-006	2082962.218	749402.110	Beryllium	1.800	NA	921.0	0.966	mg/kg	0.25	0.75
CB40-006	2082962.218	749402.110	Chromium	34.000	NA	268.0	16.990	mg/kg	0.25	0.75
CB40-006	2082962.218	749402.110	Iron	25000.000	NA	307000.0	18037.000	mg/kg	0.25	0.75
CB40-006	2082962.218	749402.110	Lithium	22.000	NA	20400.0	11.550	mg/kg	0.25	0.75
CB40-006	2082962.218	749402.110	Mercury	0.160	NA	25200.0	0.134	mg/kg	0.25	0.75
CB40-006	2082962.218	749402.110	Nickel	23.000	NA	20400.0	14.910	mg/kg	0.25	0.75
CB40-006	2082962.218	749402.110	Uranium-235	0.167	NA	8.0	0.094	pCi/g	0.25	0.75
CB40-006	2082962.218	749402.110	Vanadium	63.000	NA	7150.0	45.590	mg/kg	0.25	0.75
CB40-006	2082962.218	749402.110	Aluminum	58000.000	NA	228000.0	35373.170	mg/kg	0.75	2.75
CB40-006	2082962.218	749402.110	Barium	570.000	NA	26400.0	289.380	mg/kg	0.75	2.75
CB40-006	2082962.218	749402.110	Chromium	83.000	NA	268.0	68.270	mg/kg	0.75	2.75
CB40-006	2082962.218	749402.110	Lithium	45.000	NA	20400.0	34.660	mg/kg	0.75	2.75
CB40-006	2082962.218	749402.110	Nickel	190.000	NA	20400.0	62.210	mg/kg	0.75	2.75
CB40-007	2083042.115	749504.427	Aluminum	47000.000	NA	228000.0	35373.170	mg/kg	0.5	2.5
CB40-008	2083011.224	749479.487	Aluminum	21000.000	NA	228000.0	16902.000	mg/kg	0	0.5
CB40-008	2083011.224	749479.487	Chromium	20.000	NA	268.0	16.990	mg/kg	0	0.5
CB40-008	2083011.224	749479.487	Lithium	34.000	NA	20400.0	11.550	mg/kg	0	0.5
CB40-008	2083011.224	749479.487	Mercury	0.140	NA	25200.0	0.134	mg/kg	0	0.5

Location	Actual Easting	Actual Northing	Analyte	Result	Reporting Limit	WRW AL	Background Mean + 2 Standard Deviations	Unit	Start Depth (ft)	End Depth (ft)
CB40-008	2083011.224	749479.487	Nickel	16.000	NA	20400.0	14.910	mg/kg	0	0.5
CB40-008	2083011.224	749479.487	Lithium	64.000	NA	20400.0	34.660	mg/kg	0.5	2.5
CB40-008	2083011.224	749479.487	Uranium-235	0.147	NA	8.0	0.120	pCi/g	0.5	2.5
CB40-009	2082985.382	749459.994	Uranium-238	2.578	NA	351.0	1.490	pCi/g	0.5	2.5
CB40-010	2082957.081	749437.774	Aluminum	41000.000	NA	228000.0	16902.000	mg/kg	0.25	0.75
CB40-010	2082957.081	749437.774	Arsenic	17.000	NA	22.2	10.090	mg/kg	0.25	0.75
CB40-010	2082957.081	749437.774	Beryllium	1.800	NA	921.0	0.966	mg/kg	0.25	0.75
CB40-010	2082957.081	749437.774	Chromium	35.000	NA	268.0	16.990	mg/kg	0.25	0.75
CB40-010	2082957.081	749437.774	Iron	24000.000	NA	307000.0	18037.000	mg/kg	0.25	0.75
CB40-010	2082957.081	749437.774	Lithium	21.000	NA	20400.0	11.550	mg/kg	0.25	0.75
CB40-010	2082957.081	749437.774	Nickel	31.000	NA	20400.0	14.910	mg/kg	0.25	0.75
CB40-010	*2082957.081*	*749437.774*	*Uranium-234*	*3.266*	NA	*300.0*	*2.253*	*pCi/g*	*0.25*	*0.75*
CB40-010	2082957.081	749437.774	Uranium-238	3.266	NA	351.0	2.000	pCi/g	0.25	0.75
CB40-010	2082957.081	749437.774	Vanadium	72.000	NA	7150.0	45.590	mg/kg	0.25	0.75
CB40-010	*2082957.081*	*749437.774*	*Uranium-234*	*4.535*	NA	*300.0*	*2.640*	*pCi/g*	*0.75*	*2.75*
CB40-010	2082957.081	749437.774	Uranium-235	0.201	NA	8.0	0.120	pCi/g	0.75	2.75
CB40-010	2082957.081	749437.774	Uranium-238	4.535	NA	351.0	1.490	pCi/g	0.75	2.75
CB40-011	2083037.118	749540.020	Aluminum	33000.000	NA	228000.0	16902.000	mg/kg	0	0.5
CB40-011	2083037.118	749540.020	Beryllium	1.300	NA	921.0	0.966	mg/kg	0	0.5
CB40-011	2083037.118	749540.020	Chromium	22.000	NA	268.0	16.990	mg/kg	0	0.5
CB40-011	2083037.118	749540.020	Lithium	15.000	NA	20400.0	11.550	mg/kg	0	0.5
CB40-011	2083037.118	749540.020	Mercury	0.260	NA	25200.0	0.134	mg/kg	0	0.5
CB40-011	2083037.118	749540.020	Nickel	16.000	NA	20400.0	14.910	mg/kg	0	0.5
CB40-011	2083037.118	749540.020	Vanadium	48.000	NA	7150.0	45.590	mg/kg	0	0.5
CB40-011	2083037.118	749540.020	Aluminum	38000.000	NA	228000.0	35373.170	mg/kg	0.5	2.5
CB40-011	2083037.118	749540.020	Plutonium-239/240	0.184	NA	50.0	0.020	pCi/g	0.5	2.5
CB40-012	2083008.714	749517.788	Antimony	0.570	NA	409.0	0.470	mg/kg	0	0.5
CB40-012	2083008.714	749517.788	Chromium	35.000	NA	268.0	16.990	mg/kg	0	0.5
CB40-012	2083008.714	749517.788	Copper	26.000	NA	40900.0	18.060	mg/kg	0	0.5
CB40-012	2083008.714	749517.788	Nickel	22.000	NA	20400.0	14.910	mg/kg	0	0.5

Location	Actual Easting	Actual Northing	Analyte	Result	Reporting Limit	WRW AL	Background Mean + 2 Standard Deviations	Unit	Start Depth (ft)	End Depth (ft)
CB40-012	2083008.714	749517.788	Uranium-235	0.152	NA	8.0	0.094	pCi/g	0	0.5
CB40-012	2083008.714	749517.788	Zinc	360.000	NA	307000.0	73.760	mg/kg	0	0.5
CB40-012	*2083008.714*	*749517.788*	*Uranium-234*	*3.848*	NA	*300.0*	*2.640*	*pCi/g*	*0.5*	*2.5*
CB40-012	2083008.714	749517.788	Uranium-235	0.230	NA	8.0	0.120	pCi/g	0.5	2.5
CB40-012	2083008.714	749517.788	Uranium-238	3.848	NA	351.0	1.490	pCi/g	0.5	2.5
CB40-013	*2082980.439*	*749495.600*	*Uranium-234*	*3.447*	NA	*300.0*	*2.253*	*pCi/g*	*0*	*0.5*
CB40-013	2082980.439	749495.600	Uranium-235	0.208	NA	8.0	0.094	pCi/g	0	0.5
CB40-013	2082980.439	749495.600	Uranium-238	3.447	NA	351.0	2.000	pCi/g	0	0.5
CB40-013	2082980.439	749495.600	Aluminum	47000.000	NA	228000.0	35373.170	mg/kg	0.5	2.5
CB40-013	2082980.439	749495.600	Uranium-235	0.130	NA	8.0	0.120	pCi/g	0.5	2.5
CB40-014	2082951.983	749473.404	Arsenic	11.000	NA	22.2	10.090	mg/kg	0.25	0.75
CB40-014	*2082951.983*	*749473.404*	*Uranium-234*	*4.575*	NA	*300.0*	*2.253*	*pCi/g*	*0.25*	*0.75*
CB40-014	2082951.983	749473.404	Uranium-235	0.118	NA	8.0	0.094	pCi/g	0.25	0.75
CB40-014	2082951.983	749473.404	Uranium-238	4.575	NA	351.0	2.000	pCi/g	0.25	0.75
CB40-014	2082951.983	749473.404	Aluminum	38000.000	NA	228000.0	35373.170	mg/kg	0.75	2.75
CB40-014	2082951.983	749473.404	Uranium-238	1.767	NA	351.0	1.490	pCi/g	0.75	2.75
CB40-015	2083003.683	749553.391	Aluminum	24000.000	NA	228000.0	16902.000	mg/kg	0.5	1
CB40-015	2083003.683	749553.391	Arsenic	15.000	NA	22.2	10.090	mg/kg	0.5	1
CB40-015	2083003.683	749553.391	Chromium	21.000	NA	268.0	16.990	mg/kg	0.5	1
CB40-015	2083003.683	749553.391	Lithium	16.000	NA	20400.0	11.550	mg/kg	0.5	1
CB40-015	2083003.683	749553.391	Nickel	22.000	NA	20400.0	14.910	mg/kg	0.5	1
CB40-015	*2083003.683*	*749553.391*	*Uranium-234*	*4.930*	NA	*300.0*	*2.253*	*pCi/g*	*0.5*	*1*
CB40-015	2083003.683	749553.391	Uranium-235	0.188	NA	8.0	0.094	pCi/g	0.5	1
CB40-015	2083003.683	749553.391	Uranium-238	4.930	NA	351.0	2.000	pCi/g	0.5	1
CB40-015	2083003.683	749553.391	Vanadium	62.000	NA	7150.0	45.590	mg/kg	0.5	1
CB40-015	2083003.683	749553.391	Uranium-238	1.703	NA	351.0	1.490	pCi/g	1	3
CB40-015	2083003.683	749553.391	Uranium-235	0.181	NA	8.0	0.120	pCi/g	3	5
CB40-016	2082975.269	749531.228	Strontium	59.000	NA	613000.0	48.940	mg/kg	0	0.5
CB40-016	*2082975.269*	*749531.228*	*Uranium-234*	*2.489*	NA	*300.0*	*2.253*	*pCi/g*	*0*	*0.5*
CB40-016	2082975.269	749531.228	Uranium-235	0.181	NA	8.0	0.094	pCi/g	0	0.5

Location	Actual Easting	Actual Northing	Analyte	Result	Reporting Limit	WRW AL	Background Mean + 2 Standard Deviations	Unit	Start Depth (ft)	End Depth (ft)
CB40-016	2082975.269	749531.228	Uranium-238	2.489	NA	351.0	2.000	pCi/g	0	0.5
CB40-016	2082975.269	749531.228	Aluminum	43000.000	NA	228000.0	35373.170	mg/kg	0.5	1.5
CB40-016	*2082975.269*	*749531.228*	*Uranium-234*	*4.674*	NA	*300.0*	*2.640*	*pCi/g*	*0.5*	*1.5*
CB40-016	2082975.269	749531.228	Uranium-238	4.674	NA	351.0	1.490	pCi/g	0.5	1.5
CB40-016	2082975.269	749531.228	Uranium-238	1.554	NA	351.0	1.490	pCi/g	2.5	4.5
CB40-017	*2082947.025*	*749508.980*	*Uranium-234*	*4.003*	NA	*300.0*	*2.253*	*pCi/g*	*0.25*	*0.75*
CB40-017	2082947.025	749508.980	Uranium-235	0.183	NA	8.0	0.094	pCi/g	0.25	0.75
CB40-017	2082947.025	749508.980	Uranium-238	4.003	NA	351.0	2.000	pCi/g	0.25	0.75
CB40-017	2082947.025	749508.980	Aluminum	49000.000	NA	228000.0	35373.170	mg/kg	0.75	2.75
CB40-017	2082947.025	749508.980	Arsenic	15.000	NA	22.2	13.140	mg/kg	0.75	2.75
CB40-017	*2082947.025*	*749508.980*	*Uranium-234*	*4.851*	NA	*300.0*	*2.640*	*pCi/g*	*0.75*	*2.75*
CB40-017	2082947.025	749508.980	Uranium-235	0.223	NA	8.0	0.120	pCi/g	0.75	2.75
CB40-017	2082947.025	749508.980	Uranium-238	4.851	NA	351.0	1.490	pCi/g	0.75	2.75
CB40-018	*2082941.922*	*749544.674*	*Uranium-234*	*4.544*	NA	*300.0*	*2.640*	*pCi/g*	*0.75*	*2.75*
CB40-018	2082941.922	749544.674	Uranium-235	0.137	NA	8.0	0.120	pCi/g	0.75	2.75
CB40-018	2082941.922	749544.674	Uranium-238	4.544	NA	351.0	1.490	pCi/g	0.75	2.75
CB41-000	*2083035.089*	*749575.907*	*Uranium-234*	*4.173*	NA	*300.0*	*2.253*	*pCi/g*	*0.4*	*0.9*
CB41-000	2083035.089	749575.907	Uranium-235	0.144	NA	8.0	0.094	pCi/g	0.4	0.9
CB41-000	2083035.089	749575.907	Uranium-238	4.173	NA	351.0	2.000	pCi/g	0.4	0.9
CB41-001	2083026.918	749611.293	Antimony	0.650	NA	409.0	0.470	mg/kg	0	0.5
CB41-001	2083026.918	749611.293	Lithium	12.000	NA	20400.0	11.550	mg/kg	0	0.5
CB41-001	2083026.918	749611.293	Zinc	95.000	NA	307000.0	73.760	mg/kg	0	0.5
CB41-001	2083026.918	749611.293	Chromium	100.000	NA	268.0	68.270	mg/kg	0.5	2.5
CB41-002	*2082998.578*	*749589.096*	*Uranium-234*	*3.485*	NA	*300.0*	*2.253*	*pCi/g*	*0.25*	*0.75*
CB41-002	2082998.578	749589.096	Uranium-235	0.147	NA	8.0	0.094	pCi/g	0.25	0.75
CB41-002	2082998.578	749589.096	Uranium-238	3.485	NA	351.0	2.000	pCi/g	0.25	0.75
CB41-002	2082998.578	749589.096	Aluminum	51000.000	NA	228000.0	35373.170	mg/kg	0.75	2.75
CB41-002	2082998.578	749589.096	Uranium-238	1.910	NA	351.0	1.490	pCi/g	0.75	2.75
CB41-003	*2082970.324*	*749566.917*	*Uranium-234*	*3.826*	NA	*300.0*	*2.640*	*pCi/g*	*1*	*3*
CB41-003	2082970.324	749566.917	Uranium-238	3.826	NA	351.0	1.490	pCi/g	1	3

Location	Actual Easting	Actual Northing	Analyte	Result	Reporting Limit	WRW AL	Background Mean + 2 Standard Deviations	Unit	Start Depth (ft)	End Depth (ft)
CB41-004	2083021.938	749646.936	Plutonium-239/240	0.257	NA	50.0	0.066	pCi/g	0	0.5
CB41-004	2083021.938	749646.936	Zinc	86.000	NA	307000.0	73.760	mg/kg	0	0.5
CB41-005	2082993.471	749624.701	Aluminum	19000.000	NA	228000.0	16902.000	mg/kg	0	0.5
CB41-005	2082993.471	749624.701	Antimony	0.510	NA	409.0	0.470	mg/kg	0	0.5
CB41-005	2082993.471	749624.701	Chromium	17.000	NA	268.0	16.990	mg/kg	0	0.5
CB41-005	*2082993.471*	*749624.701*	*Uranium-234*	*3.278*	NA	*300.0*	*2.640*	*pCi/g*	*0.5*	*1.5*
CB41-005	2082993.471	749624.701	Uranium-235	0.172	NA	8.0	0.120	pCi/g	0.5	1.5
CB41-005	2082993.471	749624.701	Uranium-238	3.278	NA	351.0	1.490	pCi/g	0.5	1.5
CB41-006	2082965.179	749602.470	Manganese	400.000	NA	3480.0	365.080	mg/kg	0	0.5
CB41-006	*2082965.179*	*749602.470*	*Uranium-234*	*4.884*	NA	*300.0*	*2.253*	*pCi/g*	*0*	*0.5*
CB41-006	2082965.179	749602.470	Uranium-235	0.252	NA	8.0	0.094	pCi/g	0	0.5
CB41-006	2082965.179	749602.470	Uranium-238	4.884	NA	351.0	2.000	pCi/g	0	0.5
CB41-006	*2082965.179*	*749602.470*	*Uranium-234*	*3.129*	NA	*300.0*	*2.640*	*pCi/g*	*0.5*	*2.5*
CB41-006	2082965.179	749602.470	Uranium-235	0.177	NA	8.0	0.120	pCi/g	0.5	2.5
CB41-006	2082965.179	749602.470	Uranium-238	3.129	NA	351.0	1.490	pCi/g	0.5	2.5
CB41-007	2082936.900	749580.315	Manganese	400.000	NA	3480.0	365.080	mg/kg	0	0.5
CB41-007	2082936.900	749580.315	Uranium-238	2.192	NA	351.0	2.000	pCi/g	0	0.5
CB41-007	2082936.900	749580.315	Copper	52.000	NA	40900.0	38.210	mg/kg	0.5	2.5
CB41-007	2082936.900	749580.315	Uranium-238	2.419	NA	351.0	1.490	pCi/g	0.5	2.5
CB41-008	2083016.809	749682.624	Chromium	18.000	NA	268.0	16.990	mg/kg	0	0.5
CB41-008	2083016.809	749682.624	Lithium	12.000	NA	20400.0	11.550	mg/kg	0	0.5
CB41-008	2083016.809	749682.624	Nickel	16.000	NA	20400.0	14.910	mg/kg	0	0.5
CB41-008	*2083016.809*	*749682.624*	*Uranium-234*	*4.071*	NA	*300.0*	*2.253*	*pCi/g*	*0*	*0.5*
CB41-008	2083016.809	749682.624	Uranium-235	0.254	NA	8.0	0.094	pCi/g	0	0.5
CB41-008	2083016.809	749682.624	Uranium-238	4.071	NA	351.0	2.000	pCi/g	0	0.5
CB41-008	2083016.809	749682.624	Zinc	81.000	NA	307000.0	73.760	mg/kg	0	0.5
CB41-008	2083016.809	749682.624	Lead	29.000	NA	1000.0	24.970	mg/kg	0.5	1.2
CB41-008	*2083016.809*	*749682.624*	*Uranium-234*	*5.028*	NA	*300.0*	*2.640*	*pCi/g*	*0.5*	*1.2*
CB41-008	2083016.809	749682.624	Uranium-238	5.028	NA	351.0	1.490	pCi/g	0.5	1.2
CB41-009	*2082988.316*	*749660.504*	*Uranium-234*	*2.666*	NA	*300.0*	*2.253*	*pCi/g*	*0.25*	*0.75*

Location	Actual Easting	Actual Northing	Analyte	Result	Reporting Limit	WRW AL	Background Mean + 2 Standard Deviations	Unit	Start Depth (ft)	End Depth (ft)
CB41-009	2082988.316	749660.504	Uranium-235	0.168	NA	8.0	0.094	pCi/g	0.25	0.75
CB41-009	2082988.316	749660.504	Uranium-238	2.666	NA	351.0	2.000	pCi/g	0.25	0.75
CB41-009	2082988.316	749660.504	Aluminum	37000.000	NA	228000.0	35373.170	mg/kg	0.75	2.75
CB41-009	2082988.316	749660.504	Arsenic	14.000	NA	22.2	13.140	mg/kg	0.75	2.75
CB41-009	*2082988.316*	*749660.504*	*Uranium-234*	*4.170*	NA	*300.0*	*2.640*	*pCi/g*	*0.75*	*2.75*
CB41-009	2082988.316	749660.504	Uranium-235	0.151	NA	8.0	0.120	pCi/g	0.75	2.75
CB41-009	2082988.316	749660.504	Uranium-238	4.170	NA	351.0	1.490	pCi/g	0.75	2.75
CB41-010	2082960.047	749638.235	Chromium	17.000	NA	268.0	16.990	mg/kg	0	0.5
CB41-010	*2082960.047*	*749638.235*	*Uranium-234*	*4.411*	NA	*300.0*	*2.253*	*pCi/g*	*0*	*0.5*
CB41-010	2082960.047	749638.235	Uranium-235	0.226	NA	8.0	0.094	pCi/g	0	0.5
CB41-010	2082960.047	749638.235	Uranium-238	4.411	NA	351.0	2.000	pCi/g	0	0.5
CB41-010	2082960.047	749638.235	Uranium-235	0.174	NA	8.0	0.120	pCi/g	0.5	2.4
CB41-010	2082960.047	749638.235	Uranium-238	1.761	NA	351.0	1.490	pCi/g	0.5	2.4
CB41-011	2083040.143	749740.448	Uranium-235	0.161	NA	8.0	0.094	pCi/g	0	0.5
CB41-011	2083040.143	749740.448	Chromium	130.000	NA	268.0	68.270	mg/kg	0.5	1.2
CB41-011	2083040.143	749740.448	Lead	32.000	NA	1000.0	24.970	mg/kg	0.5	1.2
CB41-011	2083040.143	749740.448	Nickel	65.000	NA	20400.0	62.210	mg/kg	0.5	1.2
CB41-011	2083040.143	749740.448	Uranium-238	1.571	NA	351.0	1.490	pCi/g	0.5	1.2
CB41-012	2083011.700	749718.200	Antimony	3.300	NA	409.0	0.470	mg/kg	0	0.5
CB41-012	2083011.700	749718.200	Arsenic	11.000	NA	22.2	10.090	mg/kg	0	0.5
CB41-012	2083011.700	749718.200	Chromium	54.000	NA	268.0	16.990	mg/kg	0	0.5
CB41-012	2083011.700	749718.200	Copper	32.000	NA	40900.0	18.060	mg/kg	0	0.5
CB41-012	2083011.700	749718.200	Lead	86.000	NA	1000.0	54.620	mg/kg	0	0.5
CB41-012	2083011.700	749718.200	Nickel	23.000	NA	20400.0	14.910	mg/kg	0	0.5
CB41-012	2083011.700	749718.200	Plutonium-239/240	0.185	NA	50.0	0.066	pCi/g	0	0.5
CB41-012	2083011.700	749718.200	Zinc	440.000	NA	307000.0	73.760	mg/kg	0	0.5
CB41-012	2083011.700	749718.200	Lead	65.000	NA	1000.0	24.970	mg/kg	0.5	2.5
CB41-012	2083011.700	749718.200	Zinc	200.000	NA	307000.0	139.100	mg/kg	0.5	2.5
CB41-013	2082983.355	749696.016	Lithium	12.000	NA	20400.0	11.550	mg/kg	0	0.5
CB41-013	2082983.355	749696.016	Uranium-235	0.153	NA	8.0	0.094	pCi/g	0	0.5

Location	Actual Easting	Actual Northing	Analyte	Result	Reporting Limit	WRW AL	Background Mean + 2 Standard Deviations	Unit	Start Depth (ft)	End Depth (ft)
CB41-013	2082983.355	749696.016	Uranium-238	2.161	NA	351.0	1.490	pCi/g	0.5	1.5
CB41-014	2082955.095	749673.497	Aluminum	30000.000	NA	228000.0	16902.000	mg/kg	0.25	0.75
CB41-014	2082955.095	749673.497	Arsenic	12.000	NA	22.2	10.090	mg/kg	0.25	0.75
CB41-014	2082955.095	749673.497	Beryllium	1.500	NA	921.0	0.966	mg/kg	0.25	0.75
CB41-014	2082955.095	749673.497	Chromium	24.000	NA	268.0	16.990	mg/kg	0.25	0.75
CB41-014	2082955.095	749673.497	Iron	21000.000	NA	307000.0	18037.000	mg/kg	0.25	0.75
CB41-014	2082955.095	749673.497	Lithium	14.000	NA	20400.0	11.550	mg/kg	0.25	0.75
CB41-014	2082955.095	749673.497	Nickel	22.000	NA	20400.0	14.910	mg/kg	0.25	0.75
CB41-014	2082955.095	749673.497	Vanadium	60.000	NA	7150.0	45.590	mg/kg	0.25	0.75
CB41-015	2083006.709	749753.886	Aluminum	33000.000	NA	228000.0	16902.000	mg/kg	0.25	0.5
CB41-015	2083006.709	749753.886	Arsenic	13.000	NA	22.2	10.090	mg/kg	0.25	0.5
CB41-015	2083006.709	749753.886	Beryllium	1.900	NA	921.0	0.966	mg/kg	0.25	0.5
CB41-015	2083006.709	749753.886	Chromium	31.000	NA	268.0	16.990	mg/kg	0.25	0.5
CB41-015	2083006.709	749753.886	Iron	23000.000	NA	307000.0	18037.000	mg/kg	0.25	0.5
CB41-015	2083006.709	749753.886	Lithium	19.000	NA	20400.0	11.550	mg/kg	0.25	0.5
CB41-015	2083006.709	749753.886	Nickel	27.000	NA	20400.0	14.910	mg/kg	0.25	0.5
CB41-015	2083006.709	749753.886	Vanadium	62.000	NA	7150.0	45.590	mg/kg	0.25	0.5
CB41-015	2083006.709	749753.886	Uranium-235	0.162	NA	8.0	0.120	pCi/g	0.5	2.5
CB41-016	2082978.331	749731.698	Uranium-235	0.185	NA	8.0	0.094	pCi/g	0	0.5
CB41-016	*2082978.331*	*749731.698*	*Uranium-234*	*4.276*	NA	*300.0*	*2.640*	*pCi/g*	*0.5*	*1.3*
CB41-016	2082978.331	749731.698	Uranium-238	4.276	NA	351.0	1.490	pCi/g	0.5	1.3
CB41-017	2082949.995	749709.514	Uranium-235	0.120	NA	8.0	0.094	pCi/g	0.3	0.8
CB41-017	2082949.995	749709.514	Uranium-235	0.137	NA	8.0	0.120	pCi/g	0.8	2.8
CB41-018	*2082945.045*	*749745.113*	*Uranium-234*	*4.497*	NA	*300.0*	*2.253*	*pCi/g*	*0.3*	*0.5*
CB41-018	2082945.045	749745.113	Uranium-235	0.225	NA	8.0	0.094	pCi/g	0.3	0.5
CB41-018	2082945.045	749745.113	Uranium-238	4.497	NA	351.0	2.000	pCi/g	0.3	0.5
CB41-018	2082945.045	749745.113	Uranium-235	0.194	NA	8.0	0.120	pCi/g	0.5	2.5
CB42-000	2083034.975	749776.089	Chromium	18.000	NA	268.0	16.990	mg/kg	0	0.5
CB42-000	2083034.975	749776.089	Copper	39.000	NA	40900.0	18.060	mg/kg	0	0.5
CB42-000	2083034.975	749776.089	Iron	20000.000	NA	307000.0	18037.000	mg/kg	0	0.5

Location	Actual Easting	Actual Northing	Analyte	Result	Reporting Limit	WRW AL	Background Mean + 2 Standard Deviations	Unit	Start Depth (ft)	End Depth (ft)
CB42-000	2083034.975	749776.089	Manganese	370.000	NA	3480.0	365.080	mg/kg	0	0.5
CB42-000	2083034.975	749776.089	Nickel	19.000	NA	20400.0	14.910	mg/kg	0	0.5
CB42-000	2083034.975	749776.089	Uranium-235	0.164	NA	8.0	0.094	pCi/g	0	0.5
CB42-000	2083034.975	749776.089	Uranium-238	2.158	NA	351.0	2.000	pCi/g	0	0.5
CB42-000	2083034.975	749776.089	Vanadium	48.000	NA	7150.0	45.590	mg/kg	0	0.5
CB42-000	2083034.975	749776.089	Zinc	76.000	NA	307000.0	73.760	mg/kg	0	0.5
CB42-000	2083034.975	749776.089	Lead	26.000	NA	1000.0	24.970	mg/kg	0.5	1.1
CB42-000	2083034.975	749776.089	Uranium-235	0.265	NA	8.0	0.120	pCi/g	0.5	1.1
CB42-001	2083038.967	749814.037	2-Butanone	7.300	4.900	192000000.0	NA	ug/kg	0.3	0.8
CB42-001	2083038.967	749814.037	Acetone	41.000	4.800	102000000.0	NA	ug/kg	0.3	0.8
CB42-001	2083038.967	749814.037	Aluminum	32000.000	NA	228000.0	16902.000	mg/kg	0.3	0.8
CB42-001	2083038.967	749814.037	Beryllium	1.600	NA	921.0	0.966	mg/kg	0.3	0.8
CB42-001	2083038.967	749814.037	Chromium	27.000	NA	268.0	16.990	mg/kg	0.3	0.8
CB42-001	2083038.967	749814.037	Iron	20000.000	NA	307000.0	18037.000	mg/kg	0.3	0.8
CB42-001	2083038.967	749814.037	Lithium	18.000	NA	20400.0	11.550	mg/kg	0.3	0.8
CB42-001	2083038.967	749814.037	Naphthalene	3.800	0.900	3090000.0	NA	ug/kg	0.3	0.8
CB42-001	2083038.967	749814.037	Nickel	27.000	NA	20400.0	14.910	mg/kg	0.3	0.8
CB42-001	2083038.967	749814.037	Selenium	1.300	NA	5110.0	1.224	mg/kg	0.3	0.8
CB42-001	2083038.967	749814.037	Vanadium	51.000	NA	7150.0	45.590	mg/kg	0.3	0.8
CB42-001	2083038.967	749814.037	2-Butanone	10.000	5.000	192000000.0	NA	ug/kg	0.8	2.8
CB42-001	2083038.967	749814.037	Acetone	54.000	4.900	102000000.0	NA	ug/kg	0.8	2.8
CB42-001	2083038.967	749814.037	Naphthalene	2.700	0.910	3090000.0	NA	ug/kg	0.8	2.8
CB42-001	2083038.967	749814.037	2-Butanone	25.000	5.600	192000000.0	NA	ug/kg	2.8	4.8
CB42-001	2083038.967	749814.037	Acetone	160.000	5.500	102000000.0	NA	ug/kg	2.8	4.8
CB42-001	2083038.967	749814.037	Naphthalene	1.400	1.000	3090000.0	NA	ug/kg	2.8	4.8
CB42-001	2083038.967	749814.037	Acetone	14.000	5.700	102000000.0	NA	ug/kg	4.8	6.8
CB42-001	2083038.967	749814.037	Acetone	13.000	5.200	102000000.0	NA	ug/kg	6.8	8.8
CB42-001	2083038.967	749814.037	2-Butanone	11.000	5.400	192000000.0	NA	ug/kg	8.8	10.8
CB42-001	2083038.967	749814.037	Acetone	66.000	5.300	102000000.0	NA	ug/kg	8.8	10.8
CB42-001	2083038.967	749814.037	Naphthalene	2.500	0.990	3090000.0	NA	ug/kg	8.8	10.8

Location	Actual Easting	Actual Northing	Analyte	Result	Reporting Limit	WRW AL	Background Mean + 2 Standard Deviations	Unit	Start Depth (ft)	End Depth (ft)
CB42-002	2083001.627	749789.456	Vanadium	46.000	NA	7150.0	45.590	mg/kg	0.25	0.5
CB42-002	*2083001.627*	*749789.456*	*Uranium-234*	*3.965*	NA	*300.0*	*2.640*	*pCi/g*	*0.5*	*2.5*
CB42-002	2083001.627	749789.456	Uranium-238	3.965	NA	351.0	1.490	pCi/g	0.5	2.5
CB42-003	2082973.255	749767.319	Antimony	0.710	NA	409.0	0.470	mg/kg	0	0.5
CB42-003	2082973.255	749767.319	Uranium-235	0.210	NA	8.0	0.094	pCi/g	0	0.5
CB42-004	2083036.742	749845.349	Naphthalene	5.080	4.960	3090000.0	NA	ug/kg	0.5	1
CB42-004	2083036.742	749845.349	Uranium-235	0.167	NA	8.0	0.094	pCi/g	0.5	1
CB42-005	2082996.592	749825.119	Americium-241	0.133	NA	76.0	0.023	pCi/g	0.3	0.5
CB42-005	2082996.592	749825.119	Chromium	21.000	NA	268.0	16.990	mg/kg	0.3	0.5
CB42-005	2082996.592	749825.119	Iron	19000.000	NA	307000.0	18037.000	mg/kg	0.3	0.5
CB42-005	2082996.592	749825.119	Lithium	13.000	NA	20400.0	11.550	mg/kg	0.3	0.5
CB42-005	2082996.592	749825.119	Manganese	470.000	NA	3480.0	365.080	mg/kg	0.3	0.5
CB42-005	2082996.592	749825.119	Nickel	18.000	NA	20400.0	14.910	mg/kg	0.3	0.5
CB42-005	2082996.592	749825.119	Vanadium	46.000	NA	7150.0	45.590	mg/kg	0.3	0.5
CB42-005	2082996.592	749825.119	Xylene	9.100	3.100	2040000.0	NA	ug/kg	0.3	0.5
CB42-005	2082996.592	749825.119	2-Butanone	45.000	5.300	192000000.0	NA	ug/kg	0.5	2.5
CB42-005	2082996.592	749825.119	Acetone	180.000	5.200	102000000.0	NA	ug/kg	0.5	2.5
CB42-005	2082996.592	749825.119	Xylene	6.300	3.100	2040000.0	NA	ug/kg	0.5	2.5
CB42-005	2082996.592	749825.119	2-Butanone	6.800	5.500	192000000.0	NA	ug/kg	2.5	4.5
CB42-005	2082996.592	749825.119	Acetone	55.000	5.400	102000000.0	NA	ug/kg	2.5	4.5
CB42-005	2082996.592	749825.119	Acetone	18.000	5.100	102000000.0	NA	ug/kg	4.5	6.5
CB42-005	2082996.592	749825.119	Acetone	18.000	5.200	102000000.0	NA	ug/kg	6.5	8.5
CB42-005	2082996.592	749825.119	Acetone	19.000	5.100	102000000.0	NA	ug/kg	8.5	10.5
CB42-006	*2082968.201*	*749802.896*	*Uranium-234*	*3.421*	NA	*300.0*	*2.253*	*pCi/g*	*0*	*0.5*
CB42-006	2082968.201	749802.896	Uranium-235	0.200	NA	8.0	0.094	pCi/g	0	0.5
CB42-006	2082968.201	749802.896	Uranium-238	3.421	NA	351.0	2.000	pCi/g	0	0.5
CB42-006	*2082968.201*	*749802.896*	*Uranium-234*	*3.847*	NA	*300.0*	*2.640*	*pCi/g*	*0.5*	*2*
CB42-006	2082968.201	749802.896	Uranium-235	0.182	NA	8.0	0.120	pCi/g	0.5	2
CB42-006	2082968.201	749802.896	Uranium-238	3.847	NA	351.0	1.490	pCi/g	0.5	2
CB42-007	2082939.720	749780.775	Uranium-235	0.148	NA	8.0	0.094	pCi/g	0	0.5

Location	Actual Easting	Actual Northing	Analyte	Result	Reporting Limit	WRW AL	Background Mean + 2 Standard Deviations	Unit	Start Depth (ft)	End Depth (ft)
CB42-007	2082939.720	749780.775	Arsenic	19.000	NA	22.2	13.140	mg/kg	0.5	2.5
CB42-008	2083008.912	749882.597	Ethylbenzene	19.000	5.300	4250000.0	NA	ug/kg	0.25	0.75
CB42-008	2083008.912	749882.597	Naphthalene	7.890	5.300	3090000.0	NA	ug/kg	0.25	0.75
CB42-008	*2083008.912*	*749882.597*	*Uranium-234*	*3.992*	NA	*300.0*	*2.253*	*pCi/g*	*0.25*	*0.75*
CB42-008	2083008.912	749882.597	Uranium-235	0.229	NA	8.0	0.094	pCi/g	0.25	0.75
CB42-008	2083008.912	749882.597	Uranium-238	3.992	NA	351.0	2.000	pCi/g	0.25	0.75
CB42-008	2083008.912	749882.597	Xylene	80.000	10.600	2040000.0	NA	ug/kg	0.25	0.75
CB42-008	2083008.912	749882.597	Aluminum	57000.000	NA	228000.0	35373.170	mg/kg	0.75	2.75
CB42-008	2083008.912	749882.597	Nickel	71.000	NA	20400.0	62.210	mg/kg	0.75	2.75
CB42-008	*2083008.912*	*749882.597*	*Uranium-234*	*4.700*	NA	*300.0*	*2.640*	*pCi/g*	*0.75*	*2.75*
CB42-008	2083008.912	749882.597	Uranium-235	0.205	NA	8.0	0.120	pCi/g	0.75	2.75
CB42-008	2083008.912	749882.597	Uranium-238	4.700	NA	351.0	1.490	pCi/g	0.75	2.75
CB42-009	2082991.520	749860.790	Mercury	0.550	NA	25200.0	0.134	mg/kg	0.3	0.8
CB42-009	2082991.520	749860.790	Methylene chloride	0.920	0.840	2530000.0	NA	ug/kg	0.3	0.8
CB42-009	2082991.520	749860.790	Plutonium-239/240	0.097	NA	50.0	0.066	pCi/g	0.3	0.8
CB42-009	2082991.520	749860.790	Tetrachloroethene	3.300	1.000	615000.0	NA	ug/kg	0.3	0.8
CB42-009	2082991.520	749860.790	Trichloroethene	1.000	0.910	19600.0	NA	ug/kg	0.3	0.8
CB42-009	2082991.520	749860.790	2-Butanone	56.000	5.300	192000000.0	NA	ug/kg	0.8	2.8
CB42-009	2082991.520	749860.790	Acetone	290.000	5.200	102000000.0	NA	ug/kg	0.8	2.8
CB42-009	2082991.520	749860.790	Aluminum	50000.000	NA	228000.0	35373.170	mg/kg	0.8	2.8
CB42-009	2082991.520	749860.790	Arsenic	14.000	NA	22.2	13.140	mg/kg	0.8	2.8
CB42-009	2082991.520	749860.790	2-Butanone	26.000	5.700	192000000.0	NA	ug/kg	2.8	4.8
CB42-009	2082991.520	749860.790	Acetone	180.000	5.600	102000000.0	NA	ug/kg	2.8	4.8
CB42-009	2082991.520	749860.790	2-Butanone	12.000	5.600	192000000.0	NA	ug/kg	4.8	6.8
CB42-009	2082991.520	749860.790	Acetone	90.000	5.500	102000000.0	NA	ug/kg	4.8	6.8
CB42-009	2082991.520	749860.790	Acetone	32.000	5.200	102000000.0	NA	ug/kg	6.8	8.8
CB42-009	2082991.520	749860.790	Naphthalene	1.000	0.980	3090000.0	NA	ug/kg	6.8	8.8
CB42-009	2082991.520	749860.790	Acetone	14.000	5.100	102000000.0	NA	ug/kg	8.8	10.8
CB42-010	2082963.228	749838.538	Aluminum	27000.000	NA	228000.0	16902.000	mg/kg	0.25	0.5
CB42-010	2082963.228	749838.538	Barium	150.000	NA	26400.0	141.260	mg/kg	0.25	0.5

Location	Actual Easting	Actual Northing	Analyte	Result	Reporting Limit	WRW AL	Background Mean + 2 Standard Deviations	Unit	Start Depth (ft)	End Depth (ft)
CB42-010	2082963.228	749838.538	Beryllium	1.700	NA	921.0	0.966	mg/kg	0.25	0.5
CB42-010	2082963.228	749838.538	Chromium	34.000	NA	268.0	16.990	mg/kg	0.25	0.5
CB42-010	2082963.228	749838.538	Iron	23000.000	NA	307000.0	18037.000	mg/kg	0.25	0.5
CB42-010	2082963.228	749838.538	Lithium	20.000	NA	20400.0	11.550	mg/kg	0.25	0.5
CB42-010	2082963.228	749838.538	Nickel	30.000	NA	20400.0	14.910	mg/kg	0.25	0.5
CB42-010	2082963.228	749838.538	Uranium-235	0.142	NA	8.0	0.094	pCi/g	0.25	0.5
CB42-010	2082963.228	749838.538	Vanadium	58.000	NA	7150.0	45.590	mg/kg	0.25	0.5
CB42-010	2082963.228	749838.538	Ethylbenzene	8.730	6.020	4250000.0	NA	ug/kg	0.5	2.5
CB42-010	2082963.228	749838.538	Naphthalene	7.080	6.020	3090000.0	NA	ug/kg	0.5	2.5
CB42-010	2082963.228	749838.538	Xylene	50.700	12.000	2040000.0	NA	ug/kg	0.5	2.5
CB42-011	2082986.858	749893.542	Aluminum	18000.000	NA	228000.0	16902.000	mg/kg	0	0.5
CB42-011	2082986.858	749893.542	Chromium	17.000	NA	268.0	16.990	mg/kg	0	0.5
CB42-011	2082986.858	749893.542	Toluene	18.500	5.620	31300000.0	NA	ug/kg	0	0.5
CB42-011	2082986.858	749893.542	Uranium-238	1.840	NA	351.0	1.490	pCi/g	0.5	2.5
CB42-012	*2082958.106*	*749874.218*	*Uranium-234*	*5.817*	NA	*300.0*	*2.253*	*pCi/g*	*0.3*	*0.8*
CB42-012	2082958.106	749874.218	Uranium-238	5.817	NA	351.0	2.000	pCi/g	0.3	0.8
CB42-012	2082958.106	749874.218	Aluminum	65000.000	NA	228000.0	35373.170	mg/kg	0.8	2.8
CB42-012	2082958.106	749874.218	Arsenic	20.000	NA	22.2	13.140	mg/kg	0.8	2.8
CB42-012	2082958.106	749874.218	Mercury	16.000	NA	25200.0	1.520	mg/kg	0.8	2.8
CB42-012	2082958.106	749874.218	Uranium-235	0.163	NA	8.0	0.120	pCi/g	0.8	2.8
CB42-012	2082958.106	749874.218	Vanadium	93.000	NA	7150.0	88.490	mg/kg	0.8	2.8
CB42-012	2082958.106	749874.218	Acetone	288.000	134.000	102000000.0	NA	ug/kg	2.8	4.8
CB42-013	2082954.028	749907.628	Aluminum	18000.000	NA	228000.0	16902.000	mg/kg	0	0.5
CB42-013	2082954.028	749907.628	Chromium	18.000	NA	268.0	16.990	mg/kg	0	0.5
CB42-013	2082954.028	749907.628	Lithium	12.000	NA	20400.0	11.550	mg/kg	0	0.5
CB42-013	*2082954.028*	*749907.628*	*Uranium-234*	*4.514*	NA	*300.0*	*2.253*	*pCi/g*	*0*	*0.5*
CB42-013	2082954.028	749907.628	Uranium-235	0.273	NA	8.0	0.094	pCi/g	0	0.5
CB42-013	2082954.028	749907.628	Uranium-238	4.514	NA	351.0	2.000	pCi/g	0	0.5
CB42-013	2082954.028	749907.628	Aluminum	48000.000	NA	228000.0	35373.170	mg/kg	0.5	2.5
CB42-013	*2082954.028*	*749907.628*	*Uranium-234*	*3.785*	NA	*300.0*	*2.640*	*pCi/g*	*0.5*	*2.5*

Location	Actual Easting	Actual Northing	Analyte	Result	Reporting Limit	WRW AL	Background Mean + 2 Standard Deviations	Unit	Start Depth (ft)	End Depth (ft)
CB42-013	2082954.028	749907.628	Uranium-235	0.254	NA	8.0	0.120	pCi/g	0.5	2.5
CB42-013	2082954.028	749907.628	Uranium-238	3.785	NA	351.0	1.490	pCi/g	0.5	2.5

µg/kg = micrograms per kilogram (usually appears as ug/kg)
mg/kg = milligrams per kilogram
pCi/g = picocuries per gram
NA = not applicable
Bold font denotes WRW AL exceedance.
Italic font denotes result derived by calculation based on another analysis.

2.4 Sum of Ratios

Rocky Flats Cleanup Agreement (RFCA) sums of ratios (SORs) were calculated for the IHSS Group 500-4 surface soil sampling locations based on the accelerated action analytical data for the COCs. Radionuclide SOR calculations included americium-241, plutonium-239/240, uranium-234, uranium-235, and uranium-238 when analyses were greater than background means plus two standard deviations.

Plutonium-239/240 activities were derived from americium-241 activities (that is, plutonium-239/240 activity = americium-241 gamma spectroscopy activity x 5.7) where high-purity germanium (HPGe) detection was used for analysis. Table 4 presents the radionuclide SORs. All SORs for radionuclides in surface (0-3 feet) soil were less than 1.

Table 4
RFCA Radionuclide Soil SORs

Location	Start Depth (ft)	End Depth (ft)	SOR to WRW
CA39-001-01	0	0.5	0.053
CA39-001-01	0.5	2.5	0.048
CA40-000	0.25	0.75	0.019
CA40-000	0.75	2.75	0.056
CA40-001	0.75	2.75	0.030
CA40-002	0.25	0.75	0.053
CA40-002	0.75	2.75	0.060
CA40-003	0.75	2.75	0.025
CA40-004	0	0.5	0.058
CA40-004	0.5	2.5	0.030
CA40-005	0.25	0.75	0.020
CA40-005	0.75	2.75	0.054
CA40-006	0	0.5	0.003
CA40-007	0.25	0.75	0.053
CA40-007	0.75	2.75	0.005
CA40-008	0.5	2.5	0.022
CA40-010	0	0.5	0.028
CA40-010	0.5	2.5	0.004
CA41-000	0	0.5	0.056
CA41-000	0.5	2.5	0.059
CA41-001	0	0.5	0.074
CA41-001	0.5	2.1	0.056
CA41-003	0	0.5	0.069
CA41-003	0.5	2.3	0.052
CA41-004	0.8	2.8	0.109
CA41-005	0	0.5	0.058
CA41-005	0.5	2.2	0.043

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Location	Start Depth (ft)	End Depth (ft)	SOR to WRW
CA41-006	0	0.5	0.064
CA41-006	0.5	2	0.057
CA41-007	0.7	2.7	0.032
CA41-008	0.25	0.5	0.006
CA41-009	0.25	0.5	0.039
CA41-009	0.5	2.5	0.043
CA41-045	0	0.5	0.006
CA41-045	0.5	2.5	0.009
CA42-000	0.5	2.5	0.048
CA42-001	0.2	0.5	0.056
CA42-003	0.25	0.5	0.006
CA42-005	0.5	1	0.015
CA42-005	1	3	0.056
CA42-006	0.5	2.2	0.001
CA42-028	0.25	0.5	0.017
CA42-028	0.5	2.5	0.017
CA42-029	0.25	0.5	0.023
CA42-029	0.5	2.5	0.020
CB40-000	0.5	2.5	0.006
CB40-001	0	0.5	0.024
CB40-001	0.5	2.5	0.027
CB40-002	0.25	0.75	0.043
CB40-002	0.75	2.75	0.004
CB40-003	0.25	0.75	0.027
CB40-003	0.75	2.75	0.028
CB40-004	0	0.5	0.065
CB40-005	0	0.5	0.022
CB40-005	0.5	2.5	0.005
CB40-006	0.25	0.75	0.021
CB40-008	0.5	2.5	0.018
CB40-009	0.5	2.5	0.007
CB40-010	0.25	0.75	0.020
CB40-010	0.75	2.75	0.053
CB40-011	0.5	2.5	0.002
CB40-012	0	0.5	0.019
CB40-012	0.5	2.5	0.053
CB40-013	0	0.5	0.047
CB40-013	0.5	2.5	0.016
CB40-014	0.25	0.75	0.043
CB40-014	0.75	2.75	0.005
CB40-015	0.5	1	0.054
CB40-015	1	3	0.005
CB40-015	3	5	0.023
CB40-016	0	0.5	0.038

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Location	Start Depth (ft)	End Depth (ft)	SOR to WRW
CB40-016	0.5	1.5	0.029
CB40-016	2.5	4.5	0.004
CB40-017	0.25	0.75	0.048
CB40-017	0.75	2.75	0.058
CB40-018	0.75	2.75	0.045
CB41-000	0.4	0.9	0.044
CB41-002	0.25	0.75	0.040
CB41-002	0.75	2.75	0.005
CB41-003	1	3	0.024
CB41-004	0	0.5	0.002
CB41-005	0.5	1.5	0.042
CB41-006	0	0.5	0.062
CB41-006	0.5	2.5	0.041
CB41-007	0	0.5	0.006
CB41-007	0.5	2.5	0.007
CB41-008	0	0.5	0.057
CB41-008	0.5	1.2	0.031
CB41-009	0.25	0.75	0.037
CB41-009	0.75	2.75	0.045
CB41-010	0	0.5	0.056
CB41-010	0.5	2.4	0.027
CB41-011	0	0.5	0.020
CB41-011	0.5	1.2	0.004
CB41-012	0	0.5	0.002
CB41-013	0	0.5	0.019
CB41-013	0.5	1.5	0.006
CB41-015	0.5	2.5	0.020
CB41-016	0	0.5	0.023
CB41-016	0.5	1.3	0.026
CB41-017	0.3	0.8	0.015
CB41-017	0.8	2.8	0.017
CB41-018	0.3	0.5	0.056
CB41-018	0.5	2.5	0.024
CB42-000	0	0.5	0.027
CB42-000	0.5	1.1	0.033
CB42-002	0.5	2.5	0.025
CB42-003	0	0.5	0.026
CB42-004	0.5	1	0.021
CB42-005	0.3	0.5	0.002
CB42-006	0	0.5	0.046
CB42-006	0.5	2	0.047
CB42-007	0	0.5	0.018
CB42-008	0.25	0.75	0.053
CB42-008	0.75	2.75	0.055
CB42-009	0.3	0.8	0.001

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Location	Start Depth (ft)	End Depth (ft)	SOR to WRW
CB42-010	0.25	0.5	0.018
CB42-011	0.5	2.5	0.005
CB42-012	0.3	0.8	0.036
CB42-012	0.8	2.8	0.020
CB42-013	0	0.5	0.062
CB42-013	0.5	2.5	0.055

Surface soil SORs for non-radionuclide COCs are shown in Table 5. Non-radionuclide SORs were calculated for all locations with analytical results greater than 10 percent of the WRW ALs. Aluminum, arsenic, iron, manganese, and polyaromatic hydrocarbons (PAHs) were not included in the non-radionuclide SORs. All non-radionuclide SORs for surface soil were less than 1.

Table 5
RFCA Non-Radionuclide Surface Soil SORs

Location	Start Depth (ft)	End Depth (ft)	SOR to WRW
CA40-001	0.25	0.75	0.134
CA40-005	0.25	0.75	0.112
CA40-009	0.25	0.75	0.127
CA41-000	0	0.5	0.116
CA41-003	0	0.5	0.160
CA41-045	0	0.5	0.164
CA42-002	0	0.5	0.179
CB40-002	0.25	0.75	0.209
CB40-003	0.25	0.75	0.131
CB40-006	0.25	0.75	0.127
CB40-010	0.25	0.75	0.131
CB40-012	0	0.5	0.131
CB41-012	0	0.5	0.201
CB41-015	0.25	0.5	0.116
CB42-001	0.3	0.8	0.101
CB42-010	0.25	0.5	0.127

2.5 Summary Statistics

Summary statistics, by analyte, were calculated for the IHSS 500-117.2 sampling locations, as presented in Tables 6 and 7.

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Table 6
IHSS Group 500-4 Surface Soil Summary Statistics

Analyte	Number Samples Analyzed	Detection Frequency	Mean Concentration	Maximum Concentration	Background Mean Plus 2 Standard Deviations	WRW AL	Unit
Aluminum	85	37.65%	29500.000	72000	16902.000	228000	mg/kg
Antimony	85	9.41%	0.949	3.3	0.470	409	mg/kg
Arsenic	85	16.47%	13.714	18	10.090	22.2	mg/kg
Barium	85	5.88%	166.000	200	141.260	26400	mg/kg
Beryllium	85	18.82%	1.713	2.9	0.966	921	mg/kg
Chromium	85	47.06%	26.600	56	16.990	268	mg/kg
Cobalt	85	2.35%	12.000	12	10.910	1550	mg/kg
Copper	85	7.06%	26.833	39	18.060	40900	mg/kg
Iron	85	17.65%	23866.667	39000	18037.000	307000	mg/kg
Lead	85	1.18%	86.000	86	54.620	1000	mg/kg
Lithium	85	38.82%	17.970	43	11.550	20400	mg/kg
Manganese	85	4.71%	410.000	470	365.080	3480	mg/kg
Mercury	85	14.12%	0.258	0.55	0.134	25200	mg/kg
Nickel	85	41.18%	23.886	46	14.910	20400	mg/kg
Selenium	85	1.18%	1.300	1.3	1.224	5110	mg/kg
Strontium	85	2.35%	73.000	87	48.940	613000	mg/kg
Vanadium	85	22.35%	61.684	100	45.590	7150	mg/kg
Zinc	85	9.41%	176.875	440	73.760	307000	mg/kg
Americium-241	85	2.35%	0.104	0.133	0.023	76	pCi/g
Plutonium-239/240	85	7.06%	0.355	0.68	0.066	50	pCi/g
Uranium-234	85	40.00%	3.980	5.817	2.253	300	pCi/g
Uranium-235	85	51.76%	0.203	0.3131	0.094	8	pCi/g
Uranium-238	85	43.53%	3.829	5.817	2.000	351	pCi/g
2-Butanone	9	11.11%	7.300	7.3	-	192000000	µg/kg
Acetone	9	11.11%	41.000	41	-	102000000	µg/kg
Ethylbenzene	9	11.11%	19.000	19	-	4250000	µg/kg
Methylene chloride	9	11.11%	0.920	0.92	-	2530000	µg/kg
Naphthalene	9	44.44%	12.318	32.5	-	3090000	µg/kg
Tetrachloroethene	9	11.11%	3.300	3.3	-	615000	µg/kg
Toluene	9	11.11%	18.500	18.5	-	31300000	µg/kg
Trichloroethene	9	11.11%	1.000	1	-	19600	µg/kg
Xylene	9	22.22%	44.550	80	-	2040000	µg/kg

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Table 7
IHSS Group 500-4 Subsurface Soil Summary Statistics

Analyte	Number Samples Analyzed	Detection Frequency	Average Concentration	Maximum Concentration	Background Mean Plus 2 Standard Deviations	WRW AL	Unit
Aluminum	87	21.84%	48157.895	73000.000	35373.170	228000	mg/kg
Arsenic	87	12.64%	17.727	28.000	13.140	22.2	mg/kg
Barium	87	1.15%	570.000	570.000	289.380	26400	mg/kg
Chromium	87	4.60%	118.250	160.000	68.270	268	mg/kg
Copper	87	2.30%	176.000	300.000	38.210	40900	mg/kg
Lead	87	6.90%	38.167	65.000	24.970	1000	mg/kg
Lithium	87	3.45%	50.000	64.000	34.660	20400	mg/kg
Manganese	87	1.15%	1000.000	1000.000	901.620	3480	mg/kg
Mercury	87	1.15%	16.000	16.000	1.520	25200	mg/kg
Nickel	87	4.60%	121.500	190.000	62.210	20400	mg/kg
Uranium, Total	87	1.15%	3.400	3.400	3.040	2750	mg/kg
Vanadium	87	2.30%	96.500	100.000	88.490	7150	mg/kg
Zinc	87	2.30%	300.000	400.000	139.100	307000	mg/kg
Americium-241	87	2.30%	0.643	1.210	0.020	76	pCi/g
Plutonium-239/240	87	5.75%	2.497	10.800	0.020	50	pCi/g
Uranium-234	87	35.63%	4.233	5.323	2.640	300	pCi/g
Uranium-235	87	40.23%	0.198	0.322	0.120	8	pCi/g
Uranium-238	87	52.87%	3.482	5.323	1.490	351	pCi/g
2-Butanone	47	17.02%	23.975	56.000	-	192000000	µg/kg
Acetone	47	34.04%	93.188	290.000	-	102000000	µg/kg
Ethylbenzene	47	2.13%	8.730	8.730	-	4250000	µg/kg
Naphthalene	47	12.77%	5.997	21.300	-	3090000	µg/kg
Xylene	47	4.26%	28.500	50.700	-	2040000	µg/kg

3.0 RCRA UNIT CLOSURE

IHSS Group 500-4 sampling locations in the northern half of the IHSS are within RCRA Waste Management Unit 18.03. RCRA Unit 18.03 will be closed separately. Eventually the asphalt covering the IHSS Group will be removed and the area will be regraded and reseeded.

4.0 SUBSURFACE SOIL RISK SCREEN

The SSRS follows the steps identified on Figure 3 in Attachment 5 of the RFCA Modification (DOE et al. 2003):

Screen 1 – Are the COC concentrations below RFCA Table 3 ALs for the WRW?

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No. As shown in Tables 3 and 4, the arsenic concentration at location CA41-001 (28 mg/kg) exceeded the WRW AL (22.2 mg/kg).

Screen 2 – Is there a potential for subsurface soil to become surface soil (landslides and erosion areas identified on Figure 1 of the proposed RFCA Modification)?

No. IHSS Group 500-4 is not located in an area susceptible to landslides or high erosion based on RFCA Modification Attachment 5, Figure 1 (DOE et al. 2003).

Screen 3 – Does subsurface soil contamination for radionuclides exceed criteria defined in RFCA Modification Section 5.3 and Attachment 14?

No. As shown in Table 3, radionuclide concentrations are below soil WRW ALs.

Screen 4 - Is there an environmental pathway and sufficient quantity of COCs that would cause an exceedance of surface water standards?

No. Contaminant migration via erosion and groundwater are two possible pathways whereby surface water could become contaminated from IHSS Group 500-4. As stated in Screen 2 above, IHSS Group 500-4 is not located in an area likely to be eroded. GS10 is the RFCA surface water Point of Evaluation (POE) for IHSS Group 500-4. Exceedances of surface water ALs have been detected at GS10; however, this station receives water from a large part of the IA, and, therefore, surface water quality at GS10 is not attributable to any single IHSS Group such as 500-4 (DOE 2002a, 2003b).

Groundwater in the vicinity of IHSS Group 500-4 is monitored routinely at wells P114689 and P115689. The following VOCs are present above groundwater ALs in one or both wells: 1,1-dichloroethene, 1,2-dichloroethane, cis-1,2-dichloroethene, carbon tetrachloride, tetrachloroethene, trichloroethene, and vinyl chloride (DOE 2003c). The 2001 RFCA Annual Groundwater Monitoring Report (DOE 2002b) concluded that the VOC contamination in the IHSS 500-117.2 area, for the analytes above, is part of the IA Plume. The IA Plume was not considered attributable to operations associated with IHSS 500-117.2.

During accelerated action soil sampling, trace amounts of cis-1,2-dichloroethene, tetrachloroethene, and trichloroethene were detected at location CB42-009 in the interval from 0.3 to 0.8 ft (below asphalt) (Figure 4). However, the concentrations of these contaminants in the soil were well below the WRW ALs by several orders of magnitude and should not be a concern with respect to soil contributing contamination to groundwater or surface water.

Other VOCs detected in soil at IHSS 500-117.2 include trace amounts of methylene chloride (0.3-0.8 ft), acetone (0.8-10.8 ft), 2-butanone (0.8-6.8 ft), and naphthalene (6.8-8.8 ft) at location CB42-009 (Figure 4). Acetone, 2-butanone, ethylbenzene, naphthalene, and xylene are present in trace amounts at several other locations and depths and are not a concern with respect to groundwater or surface water.

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5.0 NO FURTHER ACCELERATED ACTION SUMMARY

Based on analytical results and the SSRS, action is not required, and an NFAA determination is justified for IHSS Group 500-4 - IHSS 500-117.2 because of the following:

- Contaminant concentrations were below WRW ALs with the exception of arsenic in subsurface soil at location CA41-001.
- Migration of contaminants to surface water through erosion is unlikely because the exceedances are not in an area prone to landslides or erosion.
- Migration of contaminants in groundwater will not likely impact surface water because of the low levels of soil contamination encountered in IHSS Group 500-4. The groundwater is considered part of the IA Plume, which will be further evaluated in the groundwater Interim Measure/interim Remedial Action (IM/IRA).

Approval of this Data Summary Report constitutes regulatory agency concurrence that this IHSS Group is an NFAA Site. This information and the NFAA determination will be documented in the FY04 HRR. Ecological factors will be evaluated in the AAESE process and the CRA.

6.0 DATA QUALITY ASSESSMENT

All project data quality objectives (DQOs) were achieved based on the following:

- Regulatory agency-approved sampling program design (IASAP Addendum #IA-03-05 [DOE 2003a]), modified, because of field conditions, in accordance with the IASAP (DOE 2001);
- Collection of samples in accordance with the sampling design or concurrence by regulatory agencies with modifications to the sampling plan; and
- Results of the Data Quality Assessment (DQA), as described in the following sections.

6.1 Data Quality Assessment Process

The DQA process ensures that the type, quantity, and quality of environmental data used in decision making are defensible, and is based on the following guidance and requirements:

- U.S. Environmental Protection Agency (EPA), 1994a, Guidance for the Data Quality Objective Process, QA/G-4;
- EPA, 1998, Guidance for the Data Quality Assessment Process, Practical Methods for Data Analysis, QA/G-9; and

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- U.S. Department of Energy (DOE), 1999, Quality Assurance, Order 414.1A.

Verification and validation (V&V) of data are the primary components of the DQA. The final data are compared with original project DQOs and evaluated with respect to project decisions; uncertainty within the decisions; and quality criteria required for the data, specifically precision, accuracy, representativeness, completeness, comparability, and sensitivity (PARCCS). Validation criteria are consistent with the following RFETS-specific documents and industry guidelines:

- EPA, 1994b, USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 540/R-94/012;
- EPA, 1994c, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 540/R-94/013;
- Kaiser-Hill Company, L.L.C. (K-H) V&V Guidelines:
  - General Guidelines for Data Verification and Validation, DA-GR01-v2, 2002a
  - V&V Guidelines for Isotopic Determinations by Alpha Spectrometry, DA-RC01-v2, 2002b
  - V&V Guidelines for Volatile Organics, DA-SS01-v3, 2002c
  - V&V Guidelines for Semivolatile Organics, DA-SS02-v3, 2002d
  - V&V Guidelines for Metals, DA-SS05-v3, 2002e; and
- Lockheed-Martin, 1997, Evaluation of Radiochemical Data Usability, ES/ER/MS-5.

This report will be submitted to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Administrative Record (AR) for permanent storage 30 days after being provided to CDPHE and/or EPA.

6.2 Verification and Validation of Results

Verification ensures that data produced and used by the project are documented and traceable in accordance with quality requirements. Validation consists of a technical review of all data that directly support the project decisions so that any limitations of the data relative to project goals are delineated and the associated data are qualified accordingly. The V&V process defines the criteria that constitute data quality, namely PARCCS parameters. Data traceability and archival are also addressed. V&V criteria include the following:

- Chain-of-custody;

- Preservation and hold times;
- Instrument calibrations;
- Preparation blanks;
- Interference check samples (metals);
- Matrix spikes/matrix spike duplicates (MS/MSDs);
- Laboratory control samples (LCSs);
- Field duplicate measurements;
- Chemical yield (radiochemistry);
- Required quantitation limits/minimum detectable activities (sensitivity of chemical and radiochemical measurements, respectively); and
- Sample analysis and preparation methods.

Evaluation of V&V criteria ensures that PARCCS parameters are satisfactory (that is, within tolerances acceptable to the project). Satisfactory V&V of laboratory quality controls are captured through application of validation "flags" or qualifiers to individual records.

Raw, hard-copy data (for example, individual analytical data packages) are currently filed by report identification number (RIN) and maintained by K-H Analytical Services Division (ASD); older hard copies may reside in the Federal Center in Lakewood, Colorado. Electronic data are stored in the RFETS Soil Water Database (SWD).

Both real and QC IHSS Group 500-4 data are included on the enclosed CD in Microsoft Access 2000 format.

6.2.1 Accuracy

The following measures of accuracy were evaluated:

- LCSs;
- Surrogates;
- Field blanks; and
- Sample MSs.

Results are compared to method requirements and project goals. The results of these comparisons are summarized for RFCA COCs where the results could impact project

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decisions. Particular attention is paid to those values near ALs when QC results could indicate unacceptable levels of uncertainty for decision-making purposes.

Laboratory Control Sample Evaluation

The frequency of LCS measurements is presented in Table 8. As indicated in Table 8 LCS analyses were run for all methods except for gamma spectroscopy. The onsite laboratories are not required to provide this data.

Table 8
LCS Summary

Test Method	Lab Batch	Laboratory Control Standards
Alpha Spectroscopy	4040538	Yes
Alpha Spectroscopy	4040540	Yes
Alpha Spectroscopy	4040551	Yes
Alpha Spectroscopy	4063172	Yes
Alpha Spectroscopy	4063208	Yes
Alpha Spectroscopy	4063216	Yes
Alpha Spectroscopy	4063377	Yes
Alpha Spectroscopy	4063388	Yes
Alpha Spectroscopy	4063392	Yes
Alpha Spectroscopy	4069164	Yes
Alpha Spectroscopy	4069167	Yes
Alpha Spectroscopy	4069170	Yes
Alpha Spectroscopy	4098405	Yes
Alpha Spectroscopy	4098407	Yes
Alpha Spectroscopy	4098410	Yes
Alpha Spectroscopy	4103423	Yes
Alpha Spectroscopy	4103431	Yes
Alpha Spectroscopy	4103439	Yes
Alpha Spectroscopy	4111247	Yes
Alpha Spectroscopy	4111253	Yes
Alpha Spectroscopy	4111262	Yes
SW-846 6010	4034472	Yes
SW-846 6010	4034475	Yes
SW-846 6010	4034480	Yes
SW-846 6010	4034481	Yes
SW-846 6010	4035187	Yes
SW-846 6010	4035188	Yes
SW-846 6010	4035190	Yes
SW-846 6010	4035191	Yes
SW-846 6010	4035475	Yes
SW-846 6010	4036206	Yes
SW-846 6010	4055270	Yes

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Test Method	Lab Batch	Laboratory Control Standards
SW-846 6010	4055363	Yes
SW-846 6010	4055541	Yes
SW-846 6010	4056202	Yes
SW-846 6010	4057466	Yes
SW-846 6010	4057510	Yes
SW-846 6010	4062225	Yes
SW-846 6010	4062227	Yes
SW-846 6010	4062557	Yes
SW-846 6010	4062558	Yes
SW-846 6010	4063245	Yes
SW-846 6010	4063246	Yes
SW-846 6010	4063505	Yes
SW-846 6010	4063545	Yes
SW-846 6010	4076522	Yes
SW-846 6010	4077195	Yes
SW-846 6010	4078545	Yes
SW-846 6010	4082200	Yes
SW-846 6010	4096618	Yes
SW-846 6010	4097200	Yes
SW-846 6010	4097592	Yes
SW-846 6010	4098229	Yes
SW-846 6010	4104498	Yes
SW-846 6010	4104499	Yes
SW-846 6010	4105260	Yes
SW-846 6010	4105261	Yes
SW-846 6010	4113438	Yes
SW-846 6010	4113480	Yes
SW-846 6010	4114444	Yes
SW-846 8260	4063466	Yes
SW-846 8260	4063580	Yes
SW-846 8260	4099341	Yes
SW-846 8260	MS1 VOA_040301A	Yes
SW-846 8260	MS1 VOA_040301B	Yes
SW-846 8260	MS1 VOA_040412A	Yes
SW-846 8260	MS2 VOA_040301A	Yes
SW-846 8260	MS3 VOA_040129A	Yes
SW-846 8260	MS3 VOA_040301A	Yes
SW-846 8260	MS3 VOA_040409A	Yes

Minimum and maximum LCS results are tabulated by chemical for the entire project in Table 9. LCS results that were outside of tolerances were reviewed to determine whether a potential bias might be indicated. LCS recoveries are not indicative of matrix effects

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because they are not prepared using Site samples. LCS results do indicate whether the laboratory may be introducing a bias in the results. Recoveries reported above the upper limit may indicate the actual sample results are less than reported. Because this is environmentally conservative, no further action is needed.

Table 9
LCS Evaluation Summary

Test Method	CAS	Analyte	Minimum Result	Maximum Result	Unit
SW-846 6010	7429-90-5	Aluminum	86	104	%REC
SW-846 6010	7440-36-0	Antimony	85	99	%REC
SW-846 6010	7440-38-2	Arsenic	85	98	%REC
SW-846 6010	7440-39-3	Barium	93	106	%REC
SW-846 6010	7440-41-7	Beryllium	89	106	%REC
SW-846 6010	7440-43-9	Cadmium	85	101	%REC
SW-846 6010	7440-47-3	Chromium	88	99	%REC
SW-846 6010	7440-48-4	Cobalt	86	97	%REC
SW-846 6010	7440-50-8	Copper	87	100	%REC
SW-846 6010	7439-89-6	Iron	89	105	%REC
SW-846 6010	7439-92-1	Lead	87	100	%REC
SW-846 6010	7439-93-2	Lithium	91	107	%REC
SW-846 6010	7439-96-5	Manganese	87	101	%REC
SW-846 6010	7439-97-6	Mercury	89	103	%REC
SW-846 6010	7439-98-7	Molybdenum	86	97	%REC
SW-846 6010	7440-02-0	Nickel	86	100	%REC
SW-846 6010	7782-49-2	Selenium	84	99	%REC
SW-846 6010	7440-22-4	Silver	88	102	%REC
SW-846 6010	7440-24-6	Strontium	91	102	%REC
SW-846 6010	7440-31-5	Tin	81	92	%REC
SW-846 6010	11-09-6	Uranium, Total	89	106	%REC
SW-846 6010	7440-62-2	Vanadium	89	99	%REC
SW-846 6010	7440-66-6	Zinc	82	102	%REC
SW-846 8260	71-55-6	1,1,1-Trichloroethane	86	112.3	%REC
SW-846 8260	79-34-5	1,1,2,2-Tetrachloroethane	86.64	119.8	%REC
SW-846 8260	79-00-5	1,1,2-Trichloroethane	85.02	110.6	%REC
SW-846 8260	75-34-3	1,1-Dichloroethane	89.65	112.6	%REC
SW-846 8260	75-35-4	1,1-Dichloroethene	89	126.2	%REC
SW-846 8260	120-82-1	1,2,4-Trichlorobenzene	87	139.9	%REC
SW-846 8260	95-50-1	1,2-Dichlorobenzene	87	118.5	%REC
SW-846 8260	107-06-2	1,2-Dichloroethane	89.86	114	%REC
SW-846 8260	78-87-5	1,2-Dichloropropane	91.81	114.2	%REC
SW-846 8260	106-46-7	1,4-Dichlorobenzene	88	122.5	%REC
SW-846 8260	78-93-3	2-Butanone	43.07	110	%REC
SW-846 8260	108-10-1	4-Methyl-2-pentanone	72.5	108	%REC
SW-846 8260	67-64-1	Acetone	30.32	96	%REC
SW-846 8260	71-43-2	Benzene	94	114.3	%REC

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SW-846 8260	75-27-4	Bromodichloromethane	89.05	109.4	%REC
SW-846 8260	75-25-2	Bromoform	89.09	105.9	%REC
SW-846 8260	74-83-9	Bromomethane	78.11	128.9	%REC
SW-846 8260	75-15-0	Carbon Disulfide	78	129.8	%REC
SW-846 8260	56-23-5	Carbon Tetrachloride	84	115	%REC
SW-846 8260	108-90-7	Chlorobenzene	91	116.5	%REC
SW-846 8260	75-00-3	Chloroethane	70.41	125.2	%REC
SW-846 8260	67-66-3	Chloroform	92.7	112.4	%REC
SW-846 8260	74-87-3	Chloromethane	72.45	137.6	%REC
SW-846 8260	10061-01-5	cis-1,3-Dichloropropene	93.34	112.8	%REC
SW-846 8260	124-48-1	Dibromochloromethane	89.56	116.1	%REC
SW-846 8260	100-41-4	Ethylbenzene	87.84	118.6	%REC
SW-846 8260	87-68-3	Hexachlorobutadiene	80	144.6	%REC
SW-846 8260	75-09-2	Methylene chloride	95.4	120.9	%REC
SW-846 8260	91-20-3	Naphthalene	81	125.1	%REC
SW-846 8260	100-42-5	Styrene	90.32	116.9	%REC
SW-846 8260	127-18-4	Tetrachloroethene	89	121.6	%REC
SW-846 8260	108-88-3	Toluene	91.64	134.6	%REC
SW-846 8260	10061-02-6	trans-1,3-Dichloropropene	92.3	121.8	%REC
SW-846 8260	79-01-6	Trichloroethene	91	113.7	%REC
SW-846 8260	75-01-4	Vinyl chloride	76.96	141.5	%REC
SW-846 8260	1330-20-7	Xylene	86.26	116.6	%REC

Analytes with unacceptable low recoveries were evaluated in the following manner. If the maximum sample result divided by the lowest LCS recovery for that analyte is less than the WRW AL, no further action is taken because any indicated bias is not great enough to affect project decisions. Except for arsenic, all metal and VOC LCS recoveries for IHSS Group 500-4 passed the criterion, and therefore, did not impact project decisions.

Any qualifications of individual results because of LCS performance exceeding upper or lower tolerance limits are also captured in the V&V flags, described in Section 6.2.3.

Surrogate Evaluation

The frequency of surrogate measurements, relative to each laboratory batch, is given in Table 10. Surrogate frequency was adequate based on at least one set per sample. The minimum and maximum surrogate results are also tabulated, by chemical, for the entire project. Surrogates are added to every VOC sample, and, therefore, surrogate recoveries only impact individual samples. Unacceptable surrogate recoveries can indicate potential matrix effects. Surrogate recoveries reported above 100 percent may indicate the actual sample results are less than reported. Because this is environmentally conservative, no further action is needed. Therefore, only the lowest recoveries were evaluated. If the maximum sample result divided by the lowest surrogate recovery is less than the WRW AL for that analyte, no further action is taken because any indicated bias is not great

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enough to correct a false low sample result to one above the AL. All VOC analytes passed this criterion. Therefore, surrogate recoveries did not impact project decisions with respect to IHSS Group 500-4.

Table 10
Surrogate Recovery Summary

Surrogate Frequency	Analyte	Minimum Result	Maximum Result	Unit
56	4-Bromofluorobenzene	77	167.3	%REC
56	Deuterated 1,2-dichloroethane	75	119.6	%REC
56	Deuterated toluene	86.6	122.5	%REC

Field Blank Evaluation

Results of the field blank analyses are provided in Table 11. Detectable (non-"U" laboratory qualified) amounts of contaminants within the blanks, which could indicate possible cross-contamination of samples, are evaluated if the same contaminant is detected in the associated real samples. Evaluation consists of multiplying the field blank results by 10 (for laboratory contaminants) or by 5 (for non-laboratory contaminants) and comparing them to the WRW ALs. In this case to be conservative the factor used is 10 in all cases. When the corrected field blank result is less than the WRW AL the associated real results are considered acceptable. In the IHSS Group 500-4 data none of the field blank results multiplied by 10 exceeded their WRW ALs. Therefore, blank contamination did not adversely impact project decisions.

Table 11
Field Blank Summary

Sample QC Code	Laboratory	CAS	Analyte	Detected Result	Unit
TB	URS	67-64-1	Acetone	28	µg/L
FB	URS	75-27-4	Bromodichloromethane	1.6	µg/L
FB	URS	67-66-3	Chloroform	1.8	µg/L
EB	URS	108-88-3	Toluene	3.2	µg/L
RNS	URS	108-88-3	Toluene	3.2	µg/L
TB	URS	108-88-3	Toluene	3.3	µg/L
EB	URS	15117-96-1	Uranium-235	0.177	pCi/g
FB	URS	15117-96-1	Uranium-235	0.199	pCi/g
RNS	URS	15117-96-1	Uranium-235	0.198	pCi/g
EB	URS	7440-61-1	Uranium-238	2.81	pCi/g
FB	URS	7440-61-1	Uranium-238	3.04	pCi/g
RNS	URS	7440-61-1	Uranium-238	3.12	pCi/g

Field blank (EB = equipment, field = FB, rinse = RNS, trip = TB) results greater than detection limits (not "U" qualified)
µg/L = micrograms per liter (may be found as ug/L)

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Sample Matrix Spike Evaluation

Table 12 provides a summary of the minimum and maximum MS results by chemical for the project. According to the EPA data validation guidelines (1994b), if organic MS recoveries are low, then the LCS recovery should be checked. If the recovery is acceptable, no action is taken. LCS recoveries for organic analyses with potentially low unacceptable MS recoveries were reviewed. For this project, these checks indicate no decisions were impacted for organic analytes with low MS recoveries (refer to previous section).

For inorganics with MS recoveries greater than zero, the maximum sample results were divided by the lowest percent recovery for each analyte. If the resulting number was less than the AL, decisions were not impacted. For this project, arsenic fails the criterion because the maximum result is a WRW AL exceedance.

Table 12
Sample MS Evaluation Summary

Test Method	CAS	Analyte	Minimum Result	Maximum Result	Unit	Number of MS Samples	Number of Lab Batches
SW-846 6010	7429-90-5	Aluminum	0	11900	%REC	7	7
SW-846 6010	7440-36-0	Antimony	34	73	%REC	7	7
SW-846 6010	7440-38-2	Arsenic	89	101	%REC	7	7
SW-846 6010	7440-39-3	Barium	83	126	%REC	7	7
SW-846 6010	7440-41-7	Beryllium	83	104	%REC	7	7
SW-846 6010	7440-43-9	Cadmium	81	97	%REC	7	7
SW-846 6010	7440-47-3	Chromium	0	249	%REC	7	7
SW-846 6010	7440-48-4	Cobalt	90	100	%REC	7	7
SW-846 6010	7440-50-8	Copper	78	123	%REC	7	7
SW-846 6010	7439-89-6	Iron	0	9640	%REC	7	7
SW-846 6010	7439-92-1	Lead	75	110	%REC	7	7
SW-846 6010	7439-93-2	Lithium	89	115	%REC	7	7
SW-846 6010	7439-96-5	Manganese	9.5	190	%REC	7	7
SW-846 6010	7439-97-6	Mercury	90	99	%REC	10	10
SW-846 6010	7439-98-7	Molybdenum	88	92	%REC	7	7
SW-846 6010	7440-02-0	Nickel	69	160	%REC	7	7
SW-846 6010	7782-49-2	Selenium	88	95	%REC	7	7
SW-846 6010	7440-22-4	Silver	77	101	%REC	7	7
SW-846 6010	7440-24-6	Strontium	92	109	%REC	7	7
SW-846 6010	7440-31-5	Tin	83	88	%REC	7	7
SW-846 6010	11-09-6	Uranium, Total	86	100	%REC	7	7
SW-846 6010	7440-62-2	Vanadium	73	198	%REC	7	7
SW-846 6010	7440-66-6	Zinc	45	101	%REC	7	7
SW-846 8260	71-55-6	1,1,1-Trichloroethane	65.56	108.1	%REC	7	7
SW-846 8260	79-34-5	1,1,2,2-Tetrachloroethane	52.32	143.8	%REC	7	7
SW-846 8260	79-00-5	1,1,2-Trichloroethane	55.71	116	%REC	7	7

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Test Method	CAS	Analyte	Minimum Result	Maximum Result	Unit	Number of MS Samples	Number of Lab Batches
SW-846 8260	75-34-3	1,1-Dichloroethane	56.9	113.2	%REC	7	7
SW-846 8260	75-35-4	1,1-Dichloroethene	47.96	98.7	%REC	7	7
SW-846 8260	120-82-1	1,2,4-Trichlorobenzene	16.14	74	%REC	7	7
SW-846 8260	95-50-1	1,2-Dichlorobenzene	31.46	99.34	%REC	7	7
SW-846 8260	107-06-2	1,2-Dichloroethane	55.82	103	%REC	7	7
SW-846 8260	78-87-5	1,2-Dichloropropane	54.06	108.1	%REC	7	7
SW-846 8260	106-46-7	1,4-Dichlorobenzene	32.62	102.5	%REC	7	7
SW-846 8260	78-93-3	2-Butanone	78.56	174	%REC	7	7
SW-846 8260	108-10-1	4-Methyl-2-pentanone	60.14	137.9	%REC	7	7
SW-846 8260	67-64-1	Acetone	84	299.7	%REC	7	7
SW-846 8260	71-43-2	Benzene	53.16	106.7	%REC	7	7
SW-846 8260	75-27-4	Bromodichloromethane	54.81	99.95	%REC	7	7
SW-846 8260	75-25-2	Bromoform	50.06	96	%REC	7	7
SW-846 8260	74-83-9	Bromomethane	42.12	127.4	%REC	7	7
SW-846 8260	75-15-0	Carbon Disulfide	43	110.1	%REC	7	7
SW-846 8260	56-23-5	Carbon Tetrachloride	65.32	104.6	%REC	7	7
SW-846 8260	108-90-7	Chlorobenzene	48.34	100.2	%REC	7	7
SW-846 8260	75-00-3	Chloroethane	51.48	107.2	%REC	7	7
SW-846 8260	67-66-3	Chloroform	56.98	107.8	%REC	7	7
SW-846 8260	74-87-3	Chloromethane	23.79	150.8	%REC	7	7
SW-846 8260	10061-01-5	cis-1,3-Dichloropropene	50.9	100	%REC	7	7
SW-846 8260	124-48-1	Dibromochloromethane	52.28	96	%REC	7	7
SW-846 8260	100-41-4	Ethylbenzene	49.57	97.65	%REC	7	7
SW-846 8260	87-68-3	Hexachlorobutadiene	16.3	65.55	%REC	7	7
SW-846 8260	75-09-2	Methylene chloride	49.64	103	%REC	7	7
SW-846 8260	91-20-3	Naphthalene	25.66	89	%REC	7	7
SW-846 8260	100-42-5	Styrene	43.92	95	%REC	7	7
SW-846 8260	127-18-4	Tetrachloroethene	48.82	99.08	%REC	7	7
SW-846 8260	108-88-3	Toluene	53.42	102	%REC	7	7
SW-846 8260	10061-02-6	trans-1,3-Dichloropropene	50.92	99	%REC	7	7
SW-846 8260	79-01-6	Trichloroethene	55.93	104.9	%REC	7	7
SW-846 8260	75-01-4	Vinyl chloride	39.41	113.5	%REC	7	7
SW-846 8260	1330-20-7	Xylene	46.98	98.82	%REC	7	7

Aluminum, chromium, and iron had 0 percent as minimum MS recoveries. For aluminum and iron, the respective WRW ALs are at least three times greater than the highest sample result, thus no decisions were impacted.

The maximum chromium result is approximately 60 percent of the chromium WRW AL. The five highest chromium results (160-57 mg/kg) were evaluated. Low MS recoveries for chromium did not affect project decisions because the decision whether or not to remediate included the results of the SSRS as well as the AL comparison or because the evaluation results were adequate.

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6.2.2 Precision

Precision is measured by evaluating both MSDs and field duplicates, as described in the following sections.

Matrix Spike Duplicate Evaluation

Laboratory precision is measured through the use of MSDs which are summarized in Table 13. Analytes with the highest relative percent differences (RPDs) (greater than 35 percent) were reviewed by comparing the highest sample result to the WRW AL. For analytes with RPDs greater than 35 percent, if the highest sample results were sufficiently below the ALs, no further action was needed.

Table 13
Sample MSD Evaluation

Test Method	CAS	Analyte	Maximum RPD
SW-846 6010	7429-90-5	Aluminum	117.38
SW-846 6010	7440-36-0	Antimony	34.04
SW-846 6010	7440-38-2	Arsenic	3.39
SW-846 6010	7440-39-3	Barium	29.47
SW-846 6010	7440-41-7	Beryllium	18.95
SW-846 6010	7440-43-9	Cadmium	7.50
SW-846 6010	7440-47-3	Chromium	90.45
SW-846 6010	7440-48-4	Cobalt	6.52
SW-846 6010	7440-50-8	Copper	19.65
SW-846 6010	7439-89-6	Iron	138.49
SW-846 6010	7439-92-1	Lead	18.60
SW-846 6010	7439-93-2	Lithium	14.14
SW-846 6010	7439-96-5	Manganese	99.30
SW-846 6010	7439-97-6	Mercury	8.70
SW-846 6010	7439-98-7	Molybdenum	3.35
SW-846 6010	7440-02-0	Nickel	40.46
SW-846 6010	7782-49-2	Selenium	4.26
SW-846 6010	7440-22-4	Silver	7.50
SW-846 6010	7440-24-6	Strontium	7.18
SW-846 6010	7440-31-5	Tin	4.65
SW-846 6010	11-09-6	Uranium, Total	3.55
SW-846 6010	7440-62-2	Vanadium	60.24
SW-846 6010	7440-66-6	Zinc	53.52
SW-846 8260	71-55-6	1,1,1-Trichloroethane	11.04
SW-846 8260	79-34-5	1,1,2,2-Tetrachloroethane	17.58
SW-846 8260	79-00-5	1,1,2-Trichloroethane	20.00
SW-846 8260	75-34-3	1,1-Dichloroethane	9.63
SW-846 8260	75-35-4	1,1-Dichloroethene	9.58
SW-846 8260	120-82-1	1,2,4-Trichlorobenzene	31.25

Test Method	CAS	Analyte	Maximum RPD
SW-846 8260	95-50-1	1,2-Dichlorobenzene	23.90
SW-846 8260	107-06-2	1,2-Dichloroethane	14.12
SW-846 8260	78-87-5	1,2-Dichloropropane	13.76
SW-846 8260	106-46-7	1,4-Dichlorobenzene	28.57
SW-846 8260	78-93-3	2-Butanone	15.94
SW-846 8260	108-10-1	4-Methyl-2-pentanone	21.23
SW-846 8260	67-64-1	Acetone	40.19
SW-846 8260	71-43-2	Benzene	11.28
SW-846 8260	75-27-4	Bromodichloromethane	16.28
SW-846 8260	75-25-2	Bromoform	23.26
SW-846 8260	74-83-9	Bromomethane	16.36
SW-846 8260	75-15-0	Carbon disulfide	6.79
SW-846 8260	56-23-5	Carbon tetrachloride	13.16
SW-846 8260	108-90-7	Chlorobenzene	19.21
SW-846 8260	75-00-3	Chloroethane	6.94
SW-846 8260	67-66-3	Chloroform	10.17
SW-846 8260	74-87-3	Chloromethane	13.56
SW-846 8260	10061-01-5	cis-1,3-Dichloropropene	16.22
SW-846 8260	124-48-1	Dibromochloromethane	23.26
SW-846 8260	100-41-4	Ethylbenzene	20.69
SW-846 8260	87-68-3	Hexachlorobutadiene	41.58
SW-846 8260	75-09-2	Methylene chloride	10.20
SW-846 8260	91-20-3	Naphthalene	29.89
SW-846 8260	100-42-5	Styrene	22.22
SW-846 8260	127-18-4	Tetrachloroethene	22.22
SW-846 8260	108-88-3	Toluene	18.18
SW-846 8260	10061-02-6	trans-1,3-Dichloropropene	21.23
SW-846 8260	79-01-6	Trichloroethene	9.20
SW-846 8260	75-01-4	Vinyl chloride	12.61
SW-846 8260	1330-20-7	Xylene	23.26

Aluminum, chromium, iron, manganese, nickel, vanadium, zinc, acetone, and hexachlorobutadiene had RPDs greater than 35 percent. The maximum analytical results for nickel, vanadium, zinc, acetone, and hexachlorobutadiene are more than 30 times less than their WRW ALs. Therefore, these analytes did not impact project decisions.

The maximum aluminum result represents 32 percent of its WRW AL, for chromium it is 60 percent, for iron it is 13 percent, and for manganese it is 29 percent. The maximum arsenic concentration is a WRW AL exceedance and the second highest arsenic detection (22 mg/kg, location CA40-002) is essentially equivalent to the WRW AL (22.2 mg/kg). Because they are not Site COCs, aluminum, iron, and manganese did not impact project decisions. Arsenic and chromium RPDs did not impact project decisions because the

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decision to on whether to remediate or not is based not only on the AL comparison, but also the results of the SSRS.

Field Duplicate Evaluation

Field duplicate results reflect sampling precision, or overall repeatability of the sampling process. The frequency of field duplicate collection should exceed 1 field duplicate per 20 real samples, or 5 percent. Table 14 indicates that sampling frequencies were adequate with respect to all analytical methods.

Table 14
Field Duplicate Sample Frequency Summary

Test Method	Number of Real Samples	Number of Duplicate Samples	% Duplicate Samples
Alpha Spectroscopy	28	4	14.29%
Gamma Spectroscopy	172	12	6.98%
SW-846 6010	172	12	6.98%
SW-846 8260	56	6	10.71%

Duplicate sample RPDs indicate how much variation exists in the field duplicate analyses; duplicate sample RPDs are provided in Table 15. The EPA data validation guidelines state that "there are no required review criteria for field duplicate analyses comparability" (EPA 1994b). For the DQA, the highest maximum RPDs (greater than 35 percent) are normally reviewed. In the case of IHSS Group 500-4, metal RPD results were greater than 35 percent for aluminum, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, iron, lead, lithium, manganese, mercury, nickel, strontium, vanadium, and zinc. Analytes with the highest maximum RPDs are further evaluated by comparing maximum analytical results with the WRW AL. If the highest sample concentration is sufficiently below the AL (less than 10 percent), no further action is required. Because the maximum analytical result divided by the WRW AL for barium, beryllium, cadmium, cobalt, copper, lead, lithium, mercury, nickel, strontium, vanadium and zinc is less than 10 percent, no further action with respect to these analytes is required.

Table 15
RPD Evaluation Summary

Lab Code	Test Method	Analyte	Maximum RPD
ESTLDEN	Alpha Spectroscopy	Uranium-238	2.87
ESTLDEN	SW-846 6010	Aluminum	83.69
ESTLDEN	SW-846 6010	Arsenic	101.08

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Lab Code	Test Method	Analyte	Maximum RPD
ESTLDEN	SW-846 6010	Barium	65.56
ESTLDEN	SW-846 6010	Beryllium	85.71
ESTLDEN	SW-846 6010	Cadmium	37.36
ESTLDEN	SW-846 6010	Chromium	135.66
ESTLDEN	SW-846 6010	Cobalt	93.58
ESTLDEN	SW-846 6010	Copper	80.44
ESTLDEN	SW-846 6010	Iron	66.67
ESTLDEN	SW-846 6010	Lead	70.97
ESTLDEN	SW-846 6010	Lithium	84.21
ESTLDEN	SW-846 6010	Manganese	60.47
ESTLDEN	SW-846 6010	Mercury	97.14
ESTLDEN	SW-846 6010	Nickel	125.00
ESTLDEN	SW-846 6010	Strontium	113.51
ESTLDEN	SW-846 6010	Tin	1.74
ESTLDEN	SW-846 6010	Vanadium	85.22
ESTLDEN	SW-846 6010	Zinc	72.73

The maximum analytical result for aluminum is 32 percent of the WRW AL, for arsenic it is 126 percent (this represents the WRW AL exceedance, the next highest result is essentially equal to 100 percent of the WRW AL), for chromium it is 60 percent of the WRW AL, for iron it is 13 percent, and for manganese it is 29 percent. Because aluminum, iron, and manganese are not COCs, they did not impact project decisions. Arsenic and chromium are COCs. Because results for arsenic and chromium are within the range of those commonly found at the Site, and because corrections for LCS and MS recoveries do not significantly alter the values, project decisions were not impacted by the maximum RPD values of arsenic and chromium. And, as stated above, the decision to on whether to remediate or not is based not only on the AL comparison, but also the results of the SSRS.

Because there were no detections greater than five times the detection limits, antimony, molybdenum, selenium, silver, radionuclides except for uranium-238, and VOCs do not appear in Table 15.

6.2.3 Completeness

Based on original program DQOs, a minimum of 25 percent of ER Program analytical (and radiological) results must be formally verified and validated. Of that percentage, no more than 10 percent of the results may be rejected, which ensures that analytical laboratory practices are consistent with quality requirements. Table 16 presents the number and percentage of validated records (codes without "1"), the number and percentage of verified records (codes with "1"), and the percentage of rejected records (none for the IHSS Group 500-4 project) for each analyte group. Because the frequency of validation is within project quality requirements and in compliance with the RFETS

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program validation goal of 25 percent of all analytical records and no records were rejected, the results indicate that these data are adequate.

Table 16
V&V Summary

Validation Qualifier Code	Total of CAS Number	Alpha Spectroscopy	Gamma Spectroscopy	SW-846 6010	SW-846 8260
No V&V	2	0	0	2	0
1	1	0	0	1	0
J	307	70	0	225	12
J1	808	0	0	795	13
JB	5	0	0	0	5
JB1	30	0	0	0	30
U1	7	0	0	0	7
UJ	118	0	0	94	24
UJ1	240	0	0	186	54
V	1802	0	150	829	823
V1	3956	70	366	1824	1696
Total	7276	140	516	3956	2664
Validated	2232	70	150	1148	864
% Validated	30.68%	50.00%	29.07%	29.02%	32.43%
Verified	5042	70	366	2806	1800
% Verified	69.30%	50.00%	70.93%	70.93%	67.57%

KEY: Validations: J = Estimated, JB = Estimated with possible laboratory contamination, R = Rejected, UJ = Estimated detection limit, V = Validated
Verifications: J1 = Estimated, JB1 = Estimated with possible laboratory contamination, R1 = Rejected, UJ1 = Estimated detection limit, V1 = Verified

6.2.4 Sensitivity

RLs, in units of micrograms per kilogram (µg/kg) for organics, mg/kg for metals, and picocuries per gram (pCi/g) for radionuclides, were compared with RFCA ALs. Adequate sensitivities of analytical methods were attained for all COCs that affect project decisions. "Adequate" sensitivity is defined as an RL less than an analyte's associated AL, typically less than one-half the AL.

6.3 Summary of Data Quality

LCS corrections of maximum arsenic results indicate no project decisions were impacted. Surrogate recoveries and field blank analyses are acceptable. Corrections for LCS, MS, or MSD recoveries indicate that results would not have corrected enough for these metals to have impacted project decisions.

The frequency of field duplicates is adequate. No records were rejected. Compliance with the project quality requirements and RFETS validation goal of 25 percent of all analytical records indicates these data are adequate.

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Data collected and used for IHSS Group 500-4 are adequate for decision making.

7.0 PROJECT CONCLUSIONS

Results of the accelerated action justify an NFAA determination for IHSS Group 500-4. This justification is based on the following:

- Accelerated action sampling results were less than WRW ALs except for one occurrence at location CA41-001.
- No further accelerated action is required based on surface soil data.
- No further accelerated action is required based on the SSRS.
- No further accelerated action is required based on the stewardship evaluation.

8.0 REFERENCES

CDPHE, 2003, Approval of the Final Industrial Area Sampling and Analysis Plan FY03 Addendum #IA-03-05, IHSS Group 500-4, April 2003, Denver, Colorado, May 5.

DOE, 1992-2003, Historical Release Reports for the Rocky Flats Plant, Golden, Colorado.

DOE, 1999, Quality Assurance, Order 414.1A.

DOE, 2000, Industrial Area Data Summary Report, Rocky Flats Environmental Technology Site, Golden, Colorado, September.

DOE, 2001, Industrial Area Sampling and Analysis Plan, Rocky Flats Environmental Technology Site, Golden, Colorado, June.

DOE, 2002a, RFETS Automated Surface-Water Monitoring Report, Water Years 1997-2000, Rocky Flats Environmental Technology Site, Golden, Colorado, September.

DOE, 2002b, Final 2001 Annual Rocky Flats Cleanup Agreement (RFCA) Groundwater Monitoring Report for the Rocky Flats Environmental Technology Site, Golden, Colorado, November.

DOE, 2003a, Final Industrial Area Sampling and Analysis Plan FY03 Addendum #IA-03-05, Rocky Flats Environmental Technology Site, Golden, Colorado, April.

DOE, 2003b, Automated Surface Water Monitoring Report, Water Year 2002, Rocky Flats Environmental Technology Site, Golden, Colorado, November.

DOE, 2003c, Second Quarter RFCA Groundwater Monitoring Report for Calendar Year 2003, Rocky Flats Environmental Technology Site, Golden, Colorado, November.

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DOE, CDPHE, and EPA, 2003, Modifications to the Rocky Flats Cleanup Agreement Attachment, U.S. Department of Energy, Colorado Department of Public Health and Environment, and U.S. Environmental Protection Agency, Rocky Flats Environmental Technology Site, Golden, Colorado, June.

EPA, 1994a, Guidance for the Data Quality Objective Process, QA/G-4.

EPA, 1994b, USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 540/R-94/012.

EPA, 1994c, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 540/R-94/013.

EPA, 1998, Guidance for the Data Quality Assessment Process, Practical Methods for Data Analysis, QA/G-9.

K-H, 2002a, General Guidelines for Data Verification and Validation, DA-GR01-v2, October.

K-H, 2002b, V&V Guidelines for Isotopic Determinations by Alpha Spectrometry, DA-RC01-v2, October.

K-H, 2002c, V&V Guidelines for Volatile Organics, DA-SS01-v3, October.

K-H, 2002d, V&V Guidelines for Semivolatile Organics, DA-SS02-v3, October.

K-H, 2002e, V&V Guidelines for Metals, DA-SS05-v3, October.

Lockheed-Martin, 1997, Evaluation of Radiochemical Data Usability, ES/ER/MS-5.

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APPENDIX A

CORRESPONDENCE

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE
ENVIRONMENTAL RESTORATION
REGULATORY CONTACT RECORD

Date/Time: February 19, 2004

Site Contact(s): Marla Broussard
Phone: 303-966-6007

Regulatory Contact: Harlen Ainscough, Dave Kruchek, Elizabeth Pottorff, Carl Spreng
Phone: 303-692-3300

Agency: CDPHE

Purpose of Contact: Consultative Process Meeting– Meeting Notes

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Discussion:

February 19, 2004 Comment Resolution Meetings

For

IHSS 500-169 NFAA Justification
CRA SAP
Jeb Love Report Sampling
IHSS Group 500-2 Sampling
700 Area Sampling

A meeting was held on February 19, 2004 to discuss the IHSS 500-169 NFAA Justification, CRA SAP, Jeb Love Report sampling, IHSS Group 500-2 sampling, and 700 Area sampling.

I. Attendees

CDPHE: Harlen Ainscough, Dave Kruchek, Elizabeth Pottorff, Carl Spreng
EPA: Gary Kleeman
DOE: Norma Castaneda
K-H: Marcella Broussard
K-H Team: Nick Demos, Susan Serreze

II. Report Status

Upcoming reports include Pond C-1 NFAA Justification, Draft Closeout Report for IHSS Group 900-1, Draft Closeout Report for IHSS Group 400-8 and Draft Closeout Report for IHSS Group 800-1.

III. Issues

No sitewide issues were discussed.

IV. Specific Comments

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IHSS 500-169 NFAA Justification (Note: The correct designation is PAC 500-169. RPK, 6/8/04)

The following resolutions were agreed to:

1. The large metallic object identified with geophysical instruments will be removed if within 3 feet of the surface as part of IHSS Group 500-1. (Note: The correct IHSS Group number is 500-4, RPK, 6/8/04.)
2. CDPHE and EPA concurred that IHSS 500-169 was approved as an NFAA.

CRA SAP

The following resolutions were agreed to:

1. CDPHE and EPA will provide comments, if any, and approval on the CRA SAP.

Jeb Love Report Sampling

1. Sampling of "mima mounds" was in accordance with CDPHE and EPA request.
2. CDPHE concurred that NFAA was appropriate for Site #4.
3. CDPHE and EPA will review the data and provide additional comments or NFAA for the other four sites.

IHSS Group 500-2 Sampling

The following resolutions were agreed to:

1. Fill beneath the northern part of former Building 551 will be sampled because the source of the fill is unknown.
2. The first two depth intervals (A and B) will be sampled at two locations in the fill area beneath the northern part and the second two depth intervals (C and D) will be sampled at two locations in the fill area beneath the southern part of the building footprint. A subsequent conversation between Harlen Ainscough and Marla Broussard clarified this approach so that first two depth intervals (A and B) will be sampled at one location in the fill area beneath the northern part of the building footprint and one in the fill area beneath the southern part of the building footprint and the remaining depth intervals will be sampled at one location in the fill area beneath the northern part of the building footprint and one in the fill area beneath the southern part of the building footprint.

700 Area Sampling

The following resolutions were agreed to:

1. DOE will propose additional sampling locations in the 700 Area.

V. Meetings

The next meeting is scheduled for Thursday, March 4, 2004 at 10:30 AM.

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ER REGULATORY CONTACT RECORD

Date/Time: April 20, 2004/2:15

Site Contact(s): Annette Primrose
Phone: 303 966-4385

Regulatory Contact: Harlen Ainscough
Phone: 303 692-3337

Agency: CDPHE

Purpose of Contact: Potential Buried Object at 500-4

Discussion
As described in the ER contact record dated February 19, 2004, a metallic object was previously identified within IHSS Group 500-4 that was to be removed if it was within 3 feet of the surface.

This object was attempted to be located on April 19, 2004 as follows:

- The coordinates from the previous geophysical survey were located in the field and a magnetometer was then used to locate an area about one foot wide.
- A location in the center was cored to a depth of 6 feet with very good recovery. Close examination of the core found no metallic debris.
- The original location from the geophysical survey and the recent magnetometer reading location were then cored to a depth of 4 feet. No metallic debris was noted.

Based on this, it was agreed that there wasn't an object present that required removal.

Contact Record Prepared By: Annette Primrose

Required Distribution:

M. Aguilar, USEPA
S. Bell, DOE-RFFO
J. Berardini, K-H
B. Birk, DOE-RFFO
L. Brooks, K-H ESS
M. Broussard, K-H RISS
L. Butler, K-H RISS
G. Carnival, K-H RISS
N. Castaneda, DOE-RFFO
C. Deck, K-H Legal
S. Gunderson, CDPHE
M. Keating, K-H RISS
G. Kleeman, USEPA
D. Kruchek, CDPHE
D. Mayo, K-H RISS
R. McCallister, DOE-RFFO
J. Mead, K-H ESS
S. Nesta, K-H RISS
L. Norland, K-H RISS
K. North, K-H ESS
E. Pottorff, CDPHE
A. Primrose, K-H RISS
R. Schassburger, DOE-RFFO
S. Serreze, K-H RISS
D. Shelton, K-H ESS
C. Spreng, CDPHE
S. Surovchak, DOE-RFFO
K. Wiemelt, K-H RISS
C. Zahm, K-H Legal

Additional Distribution:

Harlen Ainscough CDPHE
Mark Ruthven, KH Team
Nick Demos, KH Team

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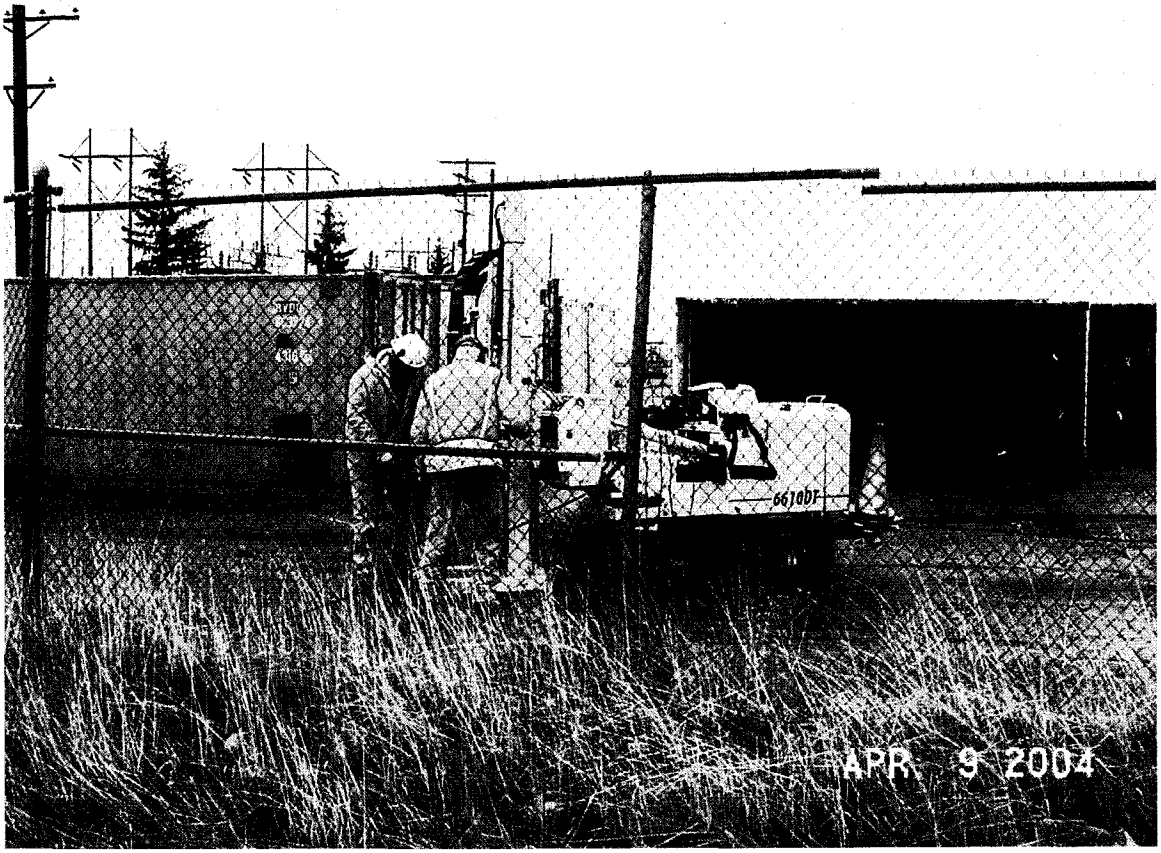
Appendix B

Photographs



IHSS 500-4, Sampling in progress

ENCLOSURE

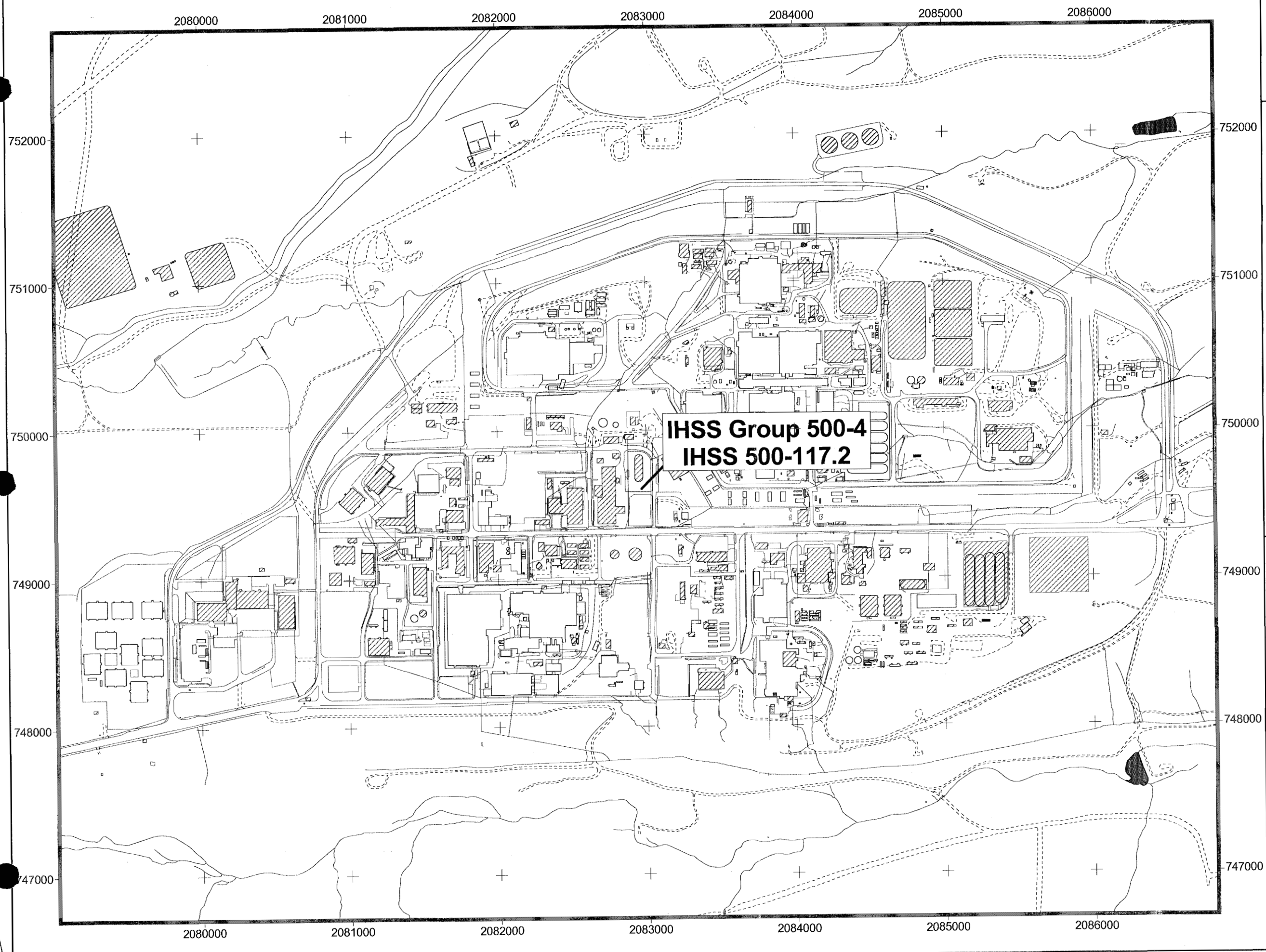
Complete Data Set Compact Disc

Accelerated Action Data

90
90

FIGURE 1

IHSS Group 500-4
General Location



KEY

- IHSS
- Building standing
- Building demolished
- Pond
- Paved road
- Dirt road
- Surface water drainage

N
W E
S

250 0 250 500 750 1000 Feet

Scale 1: 7500

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Date: 6/16/04

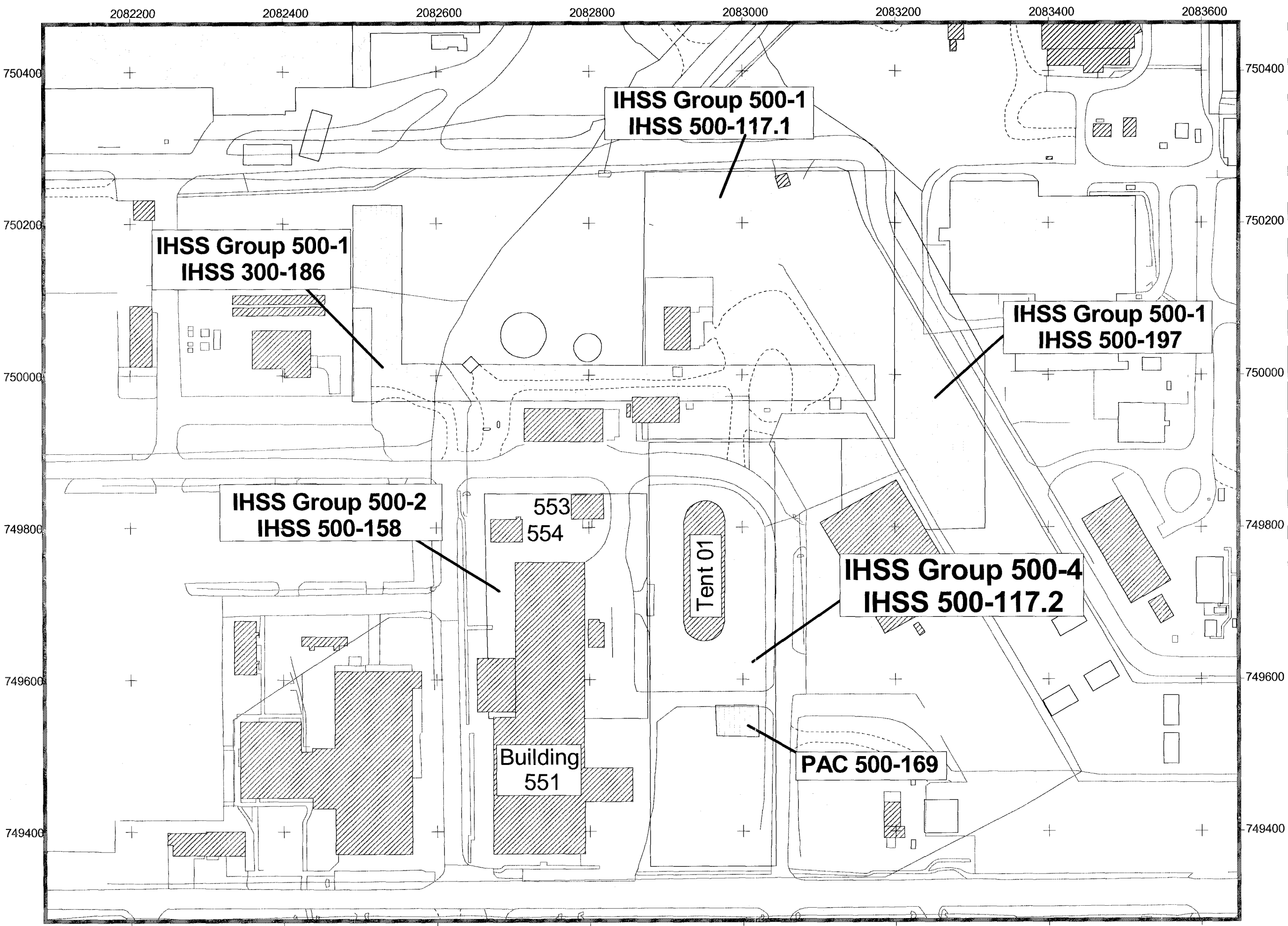
Prepared by: RADMS

Prepared for: KAISER•HILL COMPANY

File: W:\\projects\Fy2004\500-4
\Closeout\500-4_dsr_mar_jb_052804.apr

FIGURE 2

IHSS Group 500-4
Detailed Location



KEY

- IHSS
- Overlaping IHSS or PAC
- Building standing
- Building demolished
- Paved road
- Dirt road
- Surface water drainage

N
W E
S

50 0 50 100 150 200 Feet

Scale = 1:1500

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Date: 6/16/04

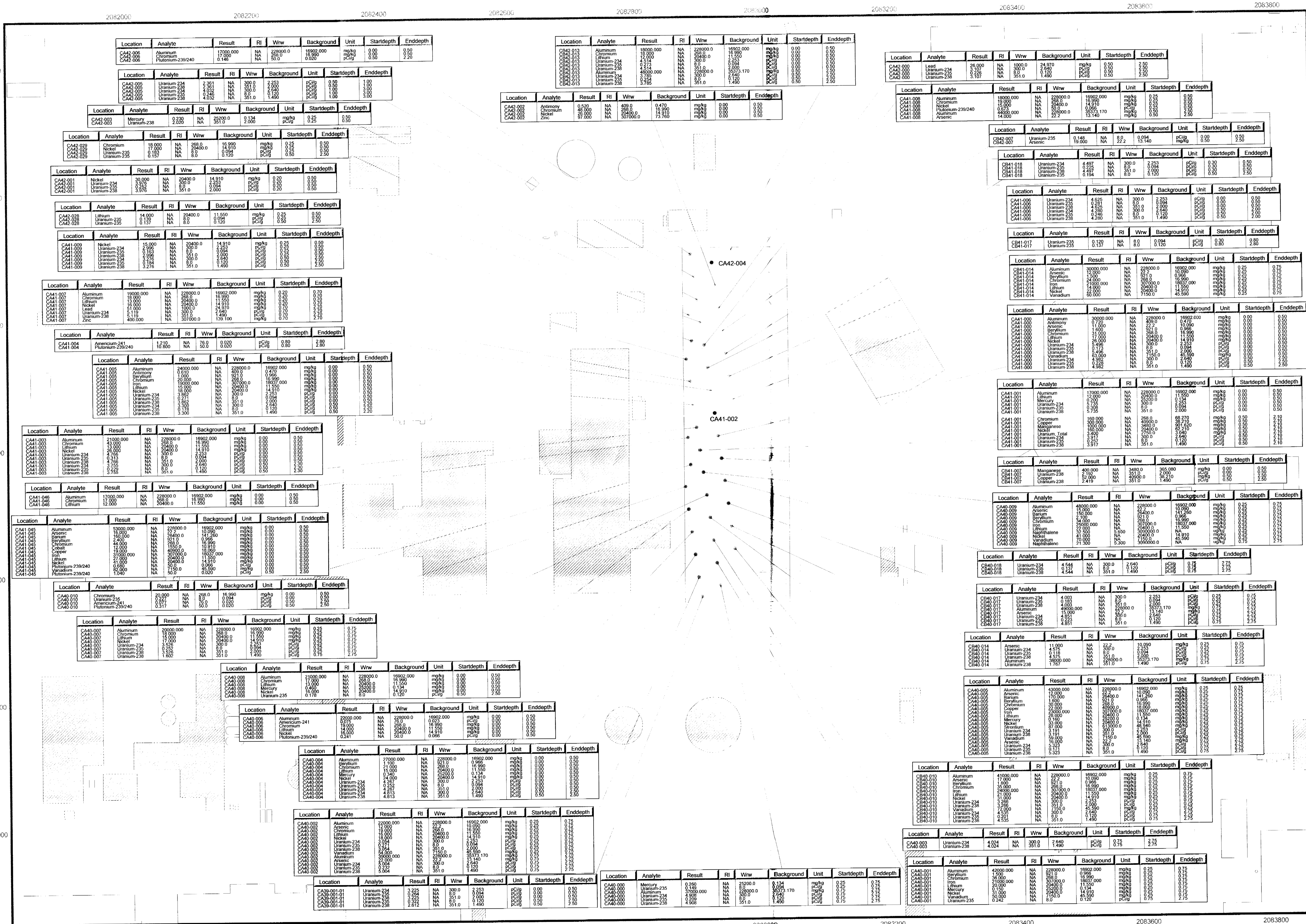
Prepared by: RADMS

Prepared for: KAISER•HILL COMPANY

File: W:\Projects\Fy2004\500-4
\Closout\500-4_dsr_mar_jb_052804.apr

FIGURE 4

IHSS Group 500-4
Accelerated Action Surface and Subsurface
Soil Sampling Results
Greater than Background Means
Plus Two Standard Deviations
or Reporting Limits
(Western Half)



Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CA42-006	Aluminum	17000.000	NA	228000.0	16902.000	mg/kg	0.00	0.50
CA42-006	Chromium	17.000	NA	268.0	16.990	mg/kg	0.00	0.50
CA42-006	Plutonium-239/240	0.146	NA	50.0	0.020	pCi/g	0.50	2.20

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CA42-005	Uranium-234	2.361	NA	300.0	2.253	pCi/g	0.50	1.00
CA42-005	Uranium-238	2.361	NA	351.0	2.000	pCi/g	0.50	1.00
CA42-005	Uranium-234	4.032	NA	300.0	2.640	pCi/g	1.00	3.00
CA42-005	Uranium-235	0.246	NA	8.0	0.120	pCi/g	1.00	3.00
CA42-005	Uranium-238	4.032	NA	351.0	1.490	pCi/g	1.00	3.00

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CA42-003	Mercury	0.230	NA	25200.0	0.134	mg/kg	0.25	0.50
CA42-003	Uranium-238	2.020	NA	351.0	2.000	pCi/g	0.25	0.50

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CA42-029	Chromium	18.000	NA	268.0	16.990	mg/kg	0.25	0.50
CA42-029	Nickel	17.000	NA	20400.0	14.910	mg/kg	0.25	0.50
CA42-029	Uranium-235	0.183	NA	8.0	0.094	pCi/g	0.25	0.50
CA42-029	Uranium-235	0.157	NA	8.0	0.120	pCi/g	0.50	2.50

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CA42-001	Nickel	30.000	NA	20400.0	14.910	mg/kg	0.20	0.50
CA42-001	Uranium-234	3.976	NA	300.0	2.253	pCi/g	0.20	0.50
CA42-001	Uranium-235	0.252	NA	8.0	0.094	pCi/g	0.20	0.50
CA42-001	Uranium-238	3.976	NA	351.0	2.000	pCi/g	0.20	0.50

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CA42-028	Lithium	14.000	NA	20400.0	11.550	mg/kg	0.25	0.50
CA42-028	Uranium-235	0.139	NA	8.0	0.094	pCi/g	0.25	0.50
CA42-028	Uranium-235	0.137	NA	8.0	0.120	pCi/g	0.50	2.50

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CA41-009	Nickel	15.000	NA	20400.0	14.910	mg/kg	0.25	0.50
CA41-009	Uranium-234	2.996	NA	300.0	2.253	pCi/g	0.25	0.50
CA41-009	Uranium-235	0.163	NA	8.0	0.094	pCi/g	0.25	0.50
CA41-009	Uranium-238	2.996	NA	351.0	2.000	pCi/g	0.25	0.50
CA41-009	Uranium-234	3.276	NA	300.0	2.640	pCi/g	0.50	2.50
CA41-009	Uranium-235	0.184	NA	8.0	0.120	pCi/g	0.50	2.50
CA41-009	Uranium-238	3.276	NA	351.0	1.490	pCi/g	0.50	2.50

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CA41-007	Aluminum	19000.000	NA	228000.0	16902.000	mg/kg	0.20	0.70
CA41-007	Chromium	18.000	NA	268.0	16.990	mg/kg	0.20	0.70
CA41-007	Lithium	13.000	NA	20400.0	11.550	mg/kg	0.20	0.70
CA41-007	Nickel	16.000	NA	20400.0	14.910	mg/kg	0.20	0.70
CA41-007	Lead	51.000	NA	1000.0	24.970	mg/kg	0.70	2.70
CA41-007	Uranium-234	5.119	NA	300.0	2.640	pCi/g	0.70	2.70
CA41-007	Uranium-238	5.119	NA	351.0	1.490	pCi/g	0.70	2.70
CA41-007	Zinc	400.000	NA	307000.0	139.100	mg/kg	0.70	2.70

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CA41-004	Americium-241	1.210	NA	76.0	0.020	pCi/g	0.80	2.80
CA41-004	Plutonium-239/240	10.800	NA	50.0	0.020	pCi/g	0.80	2.80

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CA41-005	Aluminum	24000.000	NA	228000.0	16902.000	mg/kg	0.00	0.50
CA41-005	Antimony	0.610	NA	409.0	0.470	mg/kg	0.00	0.50
CA41-005	Beryllium	1.000	NA	921.0	0.966	mg/kg	0.00	0.50
CA41-005	Chromium	20.000	NA	268.0	16.990	mg/kg	0.00	0.50
CA41-005	Iron	19000.000	NA	307000.0	18037.000	mg/kg	0.00	0.50
CA41-005	Lithium	15.000	NA	20400.0	11.550	mg/kg	0.00	0.50
CA41-005	Nickel	18.000	NA	20400.0	14.910	mg/kg	0.00	0.50
CA41-005	Uranium-234	3.862	NA	300.0	2.253	pCi/g	0.00	0.50
CA41-005	Uranium-235	0.271	NA	8.0	0.094	pCi/g	0.00	0.50
CA41-005	Uranium-238	3.862	NA	351.0	2.000	pCi/g	0.00	0.50
CA41-005	Uranium-234	3.300	NA	300.0	2.640	pCi/g	0.50	2.20
CA41-005	Uranium-235	0.178	NA	8.0	0.120	pCi/g	0.50	2.20
CA41-005	Uranium-238	3.300	NA	351.0	1.490	pCi/g	0.50	2.20

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CA41-003	Aluminum	21000.000	NA	228000.0	16902.000	mg/kg	0.00	0.50
CA41-003	Chromium	43.000	NA	268.0	16.990	mg/kg	0.00	0.50
CA41-003	Lithium	13.000	NA	20400.0	11.550	mg/kg	0.00	0.50
CA41-003	Nickel	26.000	NA	20400.0	14.910	mg/kg	0.00	0.50
CA41-003	Uranium-234	4.766	NA	300.0	2.253	pCi/g	0.00	0.50
CA41-003	Uranium-235	0.313	NA	8.0	0.094	pCi/g	0.00	0.50
CA41-003	Uranium-238	4.766	NA	351.0	2.000	pCi/g	0.00	0.50
CA41-003	Uranium-234	3.755	NA	300.0	2.640	pCi/g	0.50	2.30
CA41-003	Uranium-235	0.229	NA	8.0	0.120	pCi/g	0.50	2.30
CA41-003	Uranium-238	3.755	NA	351.0	1.490	pCi/g	0.50	2.30

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CA41-046	Aluminum	17000.000	NA	228000.0	16902.000	mg/kg	0.00	0.50
CA41-046	Chromium	17.000	NA	268.0	16.990	mg/kg	0.00	0.50
CA41-046	Lithium	12.000	NA	20400.0	11.550	mg/kg	0.00	0.50

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CA41-045	Aluminum	53000.000	NA	228000.0	16902.000	mg/kg	0.00	0.50
CA41-045	Arsenic	16.000	NA	22.2	10.090	mg/kg	0.00	0.50
CA41-045	Barium	160.000	NA	26400.0	141.260	mg/kg	0.00	0.50
CA41-045	Beryllium	2.400	NA	921.0	0.966	mg/kg	0.00	0.50
CA41-045	Chromium	44.000	NA	268.0	16.990	mg/kg	0.00	0.50
CA41-045	Cobalt	12.000	NA	1550.0	10.910	mg/kg	0.00	0.50
CA41-045	Copper	19.000	NA	40900.0	18.060	mg/kg	0.00	0.50
CA41-045	Iron	31000.000	NA	307000.0	18037.000	mg/kg	0.00	0.50
CA41-045	Lithium	27.000	NA	20400.0	11.550	mg/kg	0.00	0.50
CA41-045	Nickel	41.000	NA	20400.0	14.910	mg/kg	0.00	0.50
CA41-045	Plutonium-239/240	0.680	NA	50.0	0.066	pCi/g	0.00	0.50
CA41-045	Vanadium	82.000	NA	7150.0	45.590	mg/kg	0.00	0.50
CA41-045	Plutonium-239/240	1.040	NA	50.0	0.020	pCi/g	0.50	2.50

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CA40-010	Chromium	20.000	NA	268.0	16.990	mg/kg	0.00	0.50
CA40-010	Uranium-235	0.227	NA	8.0	0.094	pCi/g	0.00	0.50
CA40-010	Americium-241	0.077	NA	76.0	0.020	pCi/g	0.00	0.50
CA40-010	Plutonium-239/240	0.317	NA	50.0	0.020	pCi/g	0.50	2.50

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CA40-007	Aluminum	20000.000	NA	228000.0	16902.000	mg/kg	0.25	0.75
CA40-007	Chromium	18.000	NA	268.0	16.990	mg/kg	0.25	0.75
CA40-007	Lithium	15.000	NA	20400.0	11.550	mg/kg	0.25	0.75
CA40-007	Nickel	17.000	NA	20400.0	14.910	mg/kg	0.25	0.75
CA40-007	Uranium-234	3.526	NA	300.0	2.253	pCi/g	0.25	0.75
CA40-007	Uranium-235	0.252	NA	8.0	0.094	pCi/g	0.25	0.75
CA40-007	Uranium-238	3.526	NA	351.0	2.000	pCi/g	0.25	0.75
CA40-007	Uranium-238	1.602	NA	351.0	1.490	pCi/g	0.75	2.75

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CA40-008	Aluminum	21000.000	NA	228000.0	16902.000	mg/kg	0.00	0.50
CA40-008	Chromium	17.000	NA	268.0	16.990	mg/kg	0.00	0.50
CA40-008	Lithium	13.000	NA	20400.0	11.550	mg/kg	0.00	0.50
CA40-008	Mercury	0.460	NA	25200.0	0.134	mg/kg	0.00	0.50
CA40-008	Nickel	16.000	NA	20400.0	14.910	mg/kg	0.00	0.50
CA40-008	Uranium-235	0.178	NA	8.0	0.120	pCi/g	0.50	2.50

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CA40-006	Aluminum	22000.000	NA	228000.0	16902.000	mg/kg	0.00	0.50
CA40-006	Americium-241	0.075	NA	76.0	0.023	pCi/g	0.00	0.50
CA40-006	Chromium	19.000	NA	268.0	16.990	mg/kg	0.00	0.50
CA40-006	Lithium	14.000	NA	20400.0	11.550	mg/kg	0.00	0.50
CA40-006	Nickel	16.000	NA	20400.0	14.910	mg/kg	0.00	0.50
CA40-006	Plutonium-239/240	0.241	NA	50.0	0.066	pCi/g	0.00	0.50

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CA40-004	Aluminum	27000.000	NA	228000.0	16902.000	mg/kg	0.00	0.50
CA40-004	Beryllium	1.100	NA	921.0	0.966	mg/kg	0.00	0.50
CA40-004	Chromium	21.000	NA	268.0	16.990	mg/kg	0.00	0.50
CA40-004	Lithium	15.000	NA	20400.0	11.550	mg/kg	0.00	0.50
CA40-004	Mercury	0.340	NA	25200.0	0.134	mg/kg	0.00	0.50
CA40-004	Nickel	24.000	NA	20400.0	14.910	mg/kg	0.00	0.50
CA40-004	Uranium-234	4.267	NA	300.0	2.253	pCi/g	0.00	0.50
CA40-004	Uranium-235	0.252	NA	8.0	0.094	pCi/g	0.00	0.50
CA40-004	Uranium-238	4.267	NA	351.0	2.000	pCi/g	0.00	0.50
CA40-004	Uranium-234	4.813	NA	300.0	2.640	pCi/g	0.50	2.50
CA40-004	Uranium-238	4.813	NA	351.0	1.490	pCi/g	0.50	2.50

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CA40-002	Aluminum	22000.000	NA	228000.0	16902.000	mg/kg	0.25	0.75
CA40-002	Arsenic	12.000	NA	22.2	10.090	mg/kg	0.25	0.75
CA40-002	Chromium	19.000	NA	268.0	16.990	mg/kg	0.25	0.75
CA40-002	Lithium	16.000	NA	20400.0	11.550	mg/kg	0.25	0.75
CA40-002	Nickel	18.000	NA	20400.0	14.910	mg/kg	0.25	0.75
CA40-002	Uranium-234	3.054	NA	300.0	2.253	pCi/g	0.25	0.75
CA40-002	Uranium-235	0.271	NA	8.0	0.094	pCi/g	0.25	0.75
CA40-002	Uranium-238	3.054	NA	351.0	2.000	pCi/g	0.25	0.75
CA40-002	Vanadium	54.000	NA	7150.0	45.590	mg/kg	0.25	0.75
CA40-002	Aluminum	39000.000	NA	228000.0	35373.170	mg/kg	0.75	2.75
CA40-002	Arsenic	22.000	NA	22.2	13.140	mg/kg	0.75	2.75
CA40-002	Uranium-234	5.004	NA	300.0	2.640	pCi/g	0.75	2.75
CA40-002	Uranium-235	0.232	NA	8.0	0.120	pCi/g	0.75	2.75
CA40-002	Uranium-238	5.004	NA	351.0	1.490	pCi/g	0.75	2.75

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CA39-001-01	Uranium-234	3.225	NA	300.0	2.253	pCi/g	0.00	0.50
CA39-001-01	Uranium-235	0.264	NA	8.0	0.094	pCi/g	0.00	0.50
CA39-001-01	Uranium-238	3.225	NA	351.0	2.000	pCi/g	0.00	0.50
CA39-001-01	Uranium-235	0.322	NA	8.0	0.120	pCi/g	0.50	2.50
CA39-001-01	Uranium-238	2.612	NA	351.0	1.490	pCi/g	0.50	2.50

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CB42-013	Aluminum	18000.000	NA	228000.0	16902.000	mg/kg	0.00	0.50
CB42-013	Chromium	18.000	NA	268.0	16.990	mg/kg	0.00	0.50
CB42-013	Lithium	12.000	NA	20400.0	11.550	mg/kg	0.00	0.50
CB42-013	Uranium-234	4.514	NA	300.0	2.253	pCi/g	0.00	0.50
CB42-013	Uranium-235	0.273	NA	8.0	0.094	pCi/g	0.00	0.50
CB42-013	Uranium-238	4.514	NA	351.0	2.000	pCi/g	0.00	0.50
CB42-013	Aluminum	48000.000	NA	228000.0	35373.170	mg/kg	0.50	2.50
CB42-013	Uranium-234	3.785	NA	300.0	2.640	pCi/g	0.50	2.50
CB42-013	Uranium-235	0.254	NA	8.0	0.120	pCi/g	0.50	2.50
CB42-013	Uranium-238	3.785	NA	351.0	1.490	pCi/g	0.50	2.50

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CA42-002	Antimony	0.520	NA	409.0	0.470	mg/kg	0.00	0.50
CA42-002	Chromium	48.000	NA	268.0	16.990	mg/kg	0.00	0.50
CA42-002	Nickel	26.000	NA	20400.0	14.910	mg/kg	0.00	0.50
CA42-002	Zinc	97.000	NA	307000.0	73.760	mg/kg	0.00	0.50

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CA42-000	Lead	26.000	NA	1000.0	24.970	mg/kg	0.50	2.50
CA42-000	Uranium-234	3.107	NA	300.0	2.640	pCi/g	0.50	2.50
CA42-000	Uranium-235	0.226	NA	8.0	0.120	pCi/g	0.50	2.50
CA42-000	Uranium-238	3.107	NA	351.0	1.490	pCi/g	0.50	2.50

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CA41-008	Aluminum	18000.000	NA	228000.0	16902.000	mg/kg	0.25	0.50
CA41-008	Chromium	19.000	NA	268.0	16.990	mg/kg	0.25	0.50
CA41-008	Nickel	15.000	NA	20400.0	14.910	mg/kg	0.25	0.50
CA41-008	Plutonium-239/240	0.673	NA	50.0	0.066	pCi/g	0.25	0.50
CA41-008	Aluminum	44000.000	NA	228000.0	35373.170	mg/kg	0.50	2.50
CA41-008	Arsenic	14.000	NA	22.2	13.140	mg/kg	0.50	2.50

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CB42-007	Uranium-235	0.148	NA	8.0	0.094	pCi/g	0.00	0.50
CB42-007	Arsenic	19.000	NA	22.2	13.140	mg/kg	0.50	2.50

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CB41-018	Uranium-234	4.497	NA	300.0	2.253	pCi/g	0.30	0.50
CB41-018	Uranium-235	0.225	NA	8.0	0.094	pCi/g	0.30	0.50
CB41-018	Uranium-238	4.497	NA	351.0	2.000	pCi/g	0.30	0.50
CB41-018	Uranium-235	0.194	NA	8.0	0.120	pCi/g	0.50	2.50

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CA41-006	Uranium-234	4.625	NA	300.0	2.253	pCi/g	0.00	0.50
CA41-006	Uranium-235	0.281	NA	8.0	0.094	pCi/g	0.00	0.50
CA41-006	Uranium-238	4.625	NA	351.0	2.000	pCi/g	0.00	0.50
CA41-006	Uranium-234	4.280	NA	300.0	2.640	pCi/g	0.50	2.00
CA41-006	Uranium-235	0.246	NA	8.0	0.120	pCi/g	0.50	2.00
CA41-006	Uranium-238	4.280	NA	351.0	1.490	pCi/g	0.50	2.00

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CB41-017	Uranium-235	0.120	NA	8.0	0.094	pCi/g	0.30	0.80
CB41-017	Uranium-235	0.137	NA	8.0	0.120	pCi/g	0.80	2.80

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CB41-014	Aluminum	30000.000	NA	228000.0	16902.000	mg/kg	0.25	0.75
CB41-014	Arsenic	12.000	NA	22.2	10.090	mg/kg	0.25	0.75
CB41-014	Beryllium	1.500	NA	921.0	0.966	mg/kg	0.25	0.75
CB41-014	Chromium	24.000	NA	268.0	16.990	mg/kg	0.25	0.75
CB41-014	Iron	21000.000	NA	307000.0	18037.000	mg/kg	0.25	0.75
CB41-014	Lithium	14.000	NA	20400.0	11.550	mg/kg	0.25	0.75
CB41-014	Nickel	22.000	NA	20400.0	14.910	mg/kg	0.25	0.75
CB41-014	Vanadium	60.000	NA	7150.0	45.590	mg/kg	0.25	0.75

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CA41-000	Aluminum	30000.000	NA	228000.0	16902.000	mg/kg	0.00	0.50
CA41-000	Antimony	0.720	NA	409.0	0.470	mg/kg	0.00	0.50
CA41-000	Arsenic	11.000	NA	22.2	10.090	mg/kg	0.00	0.50
CA41-000	Beryllium	1.600	NA	921.0	0.966	mg/kg	0.00	0.50
CA41-000	Chromium	31.000	NA	268.0	16.990	mg/kg	0.00	0.50
CA41-000	Lithium	17.000	NA	20400.0	11.550	mg/kg	0.00	0.50
CA41-000	Nickel	26.000	NA	20400.0	14.910	mg/kg	0.00	0.50
CA41-000	Uranium-234	5.496	NA	300.0	2.253	pCi/g	0.00	0.50
CA41-000	Uranium-235	0.173	NA	8.0	0.094	pCi/g	0.00	0.50
CA41-000	Uranium-238	5.496	NA	351.0	2.000	pCi/g	0.00	0.50
CA41-000	Vanadium	63.000	NA	7150.0	45.590	mg/kg	0.00	0.50
CA41-000	Uranium-234	4.982	NA	300.0	2.640	pCi/g	0.50	2.50
CA41-000	Uranium-235	0.228	NA	8.0	0.120	pCi/g	0.50	2.50
CA41-000	Uranium-238	4.982	NA	351.0	1.490	pCi/g	0.50	2.50

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CA41-001	Aluminum	17000.000	NA	228000.0	16902.000	mg/kg	0.00	0.50
CA41-001	Lithium	12.000	NA	20400.0	11.550	mg/kg	0.00	0.50
CA41-001	Mercury	0.200	NA	25200.0	0.134	mg/kg	0.00	0.50
CA41-001	Uranium-234	5.735	NA	300.0	2.253	pCi/g	0.00	0.50
CA41-001	Uranium-235	0.308	NA	8.0	0.094	pCi/g	0.00	0.50
CA41-001	Uranium-238	5.735	NA	351.0	2.000	pCi/g	0.00	0.50
CA41-001	Chromium	160.000	NA	268.0	68.270	mg/kg	0.50	2.10
CA41-001	Copper	300.000	NA	40900.0	38.210	mg/kg	0.50	2.10
CA41-001	Manganese	1000.000	NA	3480.0	901.620	mg/kg	0.50	2.10
CA41-001	Nickel	160.000	NA	20400.0	62.210	mg/kg	0.50	2.10
CA41-001	Uranium, Total	3.400	NA	2750.0	3.040	mg/kg	0.50	2.10
CA41-001	Uranium-234	3.917	NA	300.0	2.640	pCi/g	0.50	2.10
CA41-001	Uranium-235	0.257	NA	8.0	0.120	pCi/g	0.50	2.10
CA41-001	Uranium-238	3.917	NA	351.0	1.490	pCi/g	0.50	2.10

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CB41-007	Manganese	400.000	NA	3480.0	365.080	mg/kg	0.00	0.50
CB41-007	Uranium-238	2.192	NA	351.0	2.000	pCi/g	0.00	0.50
CB41-007	Copper	52.000	NA	40900.0	38.210	mg/kg	0.50	2.50
CB41-007	Uranium-238	2.419	NA	351.0	1.490	pCi/g	0.50	2.50

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CA40-009	Aluminum	48000.000	NA	228000.0	16902.000	mg/kg	0.25	0.75
CA40-009	Arsenic	15.000	NA	22.2	10.090	mg/kg	0.25	0.75
CA40-009	Barium	150.000	NA	26400.0	141.260	mg/kg	0.25	0.75
CA40-009	Beryllium	2.100	NA	921.0	0.966	mg/kg	0.25	0.75
CA40-009	Chromium	34.000	NA	268.0	16.990	mg/kg	0.25	0.75
CA40-009	Iron	25000.000	NA	307000.0	18037.000	mg/kg	0.25	0.75
CA40-009	Lithium	22.000	NA	20400.0	11.550	mg/kg	0.25	0.75
CA40-009	Naphthalene	32.500	5.650	3090000.0	NA	ug/kg	0.25	0.75
CA40-009	Nickel	41.000	NA	20400.0	14.910	mg/kg	0.25	0.75
CA40-009	Vanadium	70.000	NA	7150.0	45.590	mg/kg	0.25	0.75
CA40-009	Naphthalene	21.300	5.300	3090000.0	NA	ug/kg	0.75	2.75

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CB40-018	Uranium-234	4.544	NA	300.0	2.640	pCi/g	0.75	2.75
CB40-018	Uranium-235	0.137	NA	8.0	0.120	pCi/g	0.75	2.75
CB40-018	Uranium-238	4.544	NA	351.0	1.490	pCi/g	0.75	2.75

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CB40-017	Uranium-234	4.003	NA	300.0	2.253	pCi/g	0.25	0.75
CB40-017	Uranium-235	0.183	NA	8.0	0.094	pCi/g	0.25	0.75
CB40-017	Uranium-238	4.003	NA	351.0	2.000	pCi/g	0.25	0.75
CB40-017	Aluminum	49000.000	NA	228000.0	35373.170	mg/kg	0.75	2.75
CB40-017	Arsenic	15.000	NA	22.2	13.140	mg/kg	0.75	2.75
CB40-017	Uranium-234	4.851	NA	300.0	2.640	pCi/g	0.75	2.75
CB40-017	Uranium-235	0.223	NA	8.0	0.120	pCi/g	0.75	2.75
CB40-017	Uranium-238	4.851	NA	351.0	1.490	pCi/g	0.75	2.75

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CB40-014	Arsenic	11.000	NA	22.2	10.090	mg/kg	0.25	0.75
CB40-014	Uranium-234	4.575	NA	300.0	2.253	pCi/g	0.25	0.75
CB40-014	Uranium-235	0.118	NA	8.0	0.094	pCi/g	0.25	0.75
CB40-014	Uranium-238	4.575	NA	351.0	2.000	pCi/g	0.25	0.75
CB40-014	Aluminum	38000.000	NA	228000.0	35373.170	mg/kg	0.75	2.75
CB40-014	Uranium-238	1.767	NA	351.0	1.490	pCi/g	0.75	2.75

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CA40-005	Aluminum	43000.000	NA	228000.0	16902.000	mg/kg	0.25	0.75
CA40-005	Arsenic	12.000	NA	22.2	10.090	mg/kg	0.25	0.75
CA40-005	Barium	170.000	NA	26400.0	141.260	mg/kg	0.25	0.75
CA40-005	Beryllium	1.600	NA	921.0	0.966	mg/kg	0.25	0.75
CA40-005	Chromium	30.000	NA	268.0	16.990	mg/kg	0.25	0.75
CA40-005	Copper	22.000	NA	40900.0	18.060	mg/kg	0.25	0.75
CA40-005	Iron	23000.000	NA	307000.0	18037.000	mg/kg	0.25	0.75
CA40-005	Lithium	28.000	NA	20400.0	11.550	mg/kg	0.25	0.75
CA40-005	Mercury	0.160	NA	25200.0	0.134	mg/kg	0.25	0.75
CA40-005	Nickel	33.000	NA	20400.0	14.910	mg/kg	0.25	0.75
CA40-005	Strontium	87.000	NA	613000.0	48.940	mg/kg	0.25	0.75
CA40-005	Uranium-234	3.191	NA	300.0	2.253	pCi/g	0.25	0.75
CA40-005	Uranium-238	3.191	NA	351.0	2.000	pCi/g	0.25	0.75
CA40-005	Vanadium	59.000	NA	7150.0	45.590	mg/kg	0.25	0.75
CA40-005	Arsenic	16.000	NA	22.2	13.140	mg/kg	0.75	2.75
CA40-005	Uranium-234	5.323	NA	300.0	2.640	pCi/g	0.75	2.75
CA40-005	Uranium-235	0.171	NA	8.0	0.120	pCi/g	0.75	2.75
CA40-005	Uranium-238	5.323	NA	351.0	1.490	pCi/g	0.75	2.75

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CB40-010	Aluminum	41000.000	NA	228000.0	16902.000	mg/kg	0.25	0.75
CB40-010	Arsenic	17.000	NA	22.2	10.090	mg/kg	0.25	0.75
CB40-010	Beryllium	1.600	NA	921.0	0.966	mg/kg	0.25	0.75
CB40-010	Chromium	35.000	NA	268.0	16.990	mg/kg	0.25	0.75
CB40-010	Iron	24000.000	NA	307000.0	18037.000	mg/kg	0.25	0.75
CB40-010	Lithium	21.000	NA	20400.0	11.550	mg/kg	0.25	0.75
CB40-010	Nickel	31.000	NA	20400.0	14.910	mg/kg	0.25	0.75
CB40-010	Uranium-234	3.266	NA	300.0	2.253	pCi/g	0.25	0.75
CB40-010	Uranium-238	3.266	NA	351.0	2.000	pCi/g	0.25	0.75
CB40-010	Vanadium	72.000	NA	7150.0	45.590	mg/kg	0.25	0.75
CB40-010	Uranium-234	4.535	NA	300.0	2.640	pCi/g	0.75	2.75
CB40-010	Uranium-235	0.201	NA	8.0	0.120	pCi/g	0.75	2.75
CB40-010	Uranium-238	4.535	NA	351.0	1.490	pCi/g	0.75	2.75

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CA40-003	Uranium-234	4.024	NA	300.0	2.640	pCi/g	0.75	2.75
CA40-003	Uranium-238	4.024	NA	351.0	1.490	pCi/g	0.75	2.75

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CA40-001	Aluminum	42000.000	NA	228000.0	16902.000	mg/kg	0.25	0.75
CA40-001	Beryllium	1.500	NA	921.0	0.966	mg/kg	0.25	0.75
CA40-001	Chromium	36.000	NA	268.0	16.990	mg/kg	0.25	0.75
CA40-001	Iron	21000.000	NA	307000.0	18037.000	mg/kg	0.25	0.75
CA40-001	Lithium	20.000	NA	20400.0	11.550	mg/kg	0.25	0.75
CA40-001	Mercury	0.150	NA	25200.0	0.134	mg/kg	0.25	0.75
CA40-001	Nickel	31.000	NA	20400.0	14.910	mg/kg	0.25	0.75
CA40-001	Vanadium	50.000	NA	7150.0	45.590	mg/kg	0.25	0.75
CA40-001	Uranium-235	0.242	NA	8.0	0.120	pCi/g	0.75	2.75

Location	Analyte	Result	RI	Wrw	Background	Unit	Startdepth	Enddepth
CA40-000	Mercury	0.260	NA	25200.0	0.134	mg/kg	0.25	0.75
CA40-000	Uranium-235	0.149	NA	8.0	0.094	pCi/g	0.25	0.75
CA40-000	Aluminum	37000.000	NA	228000.0	35373.170	mg/kg	0.75	2.75
CA40-000	Uranium-234	4.908	NA	300.0	2.640	pCi/g	0.75	2.75
CA40-000	Uranium-235	0.209	NA	8.0	0.120	pCi/g	0.75	2.75
CA40-000	Uranium-238	4.908	NA	351.0	1.490	pCi/g	0.75	2.75

KEY

- Sample location with concentration greater than Background or RLs and greater than WRW ALs
- Sample location with concentrations greater than Background or RLs and less than WRW ALs
- Sample location with concentrations less than Background or RLs and less than WRW ALs
- IHSS 500-117.2
- Demolished building
- Standing building
- Paved road
- Dirt road
- Surface water drainage

Start depth and End depth are measured in feet.

N E S W

Scale = 1:1000

50 0 50 100 150 200 250 Feet

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Date: 6/16/04

Prepared by: RADMS

Prepared for: KAISER•HILL COMPANY

File: W:\Projects\Fy2004\500-4\Closeoun
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FIGURE 3

IHSS Group 500-4
Accelerated Action Surface and Subsurface
Soil Sampling Results
Greater than Background Means
Plus Two Standard Deviations
or Reporting Limits
(Eastern Half)

KEY

Sample location with concentrations greater than Background or RLs and less than WRW ALs

IHSS 500-117.2

Demolished building

Standing building

Paved road

Dirt road

Surface water drainage

Start depth and End depth are measured in feet.

N

W E

S

Scale = 1:1000

50 0 50 100 150 200 250 Feet

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Date: 6/16/04

Prepared by: RADMS

Prepared for: KAISER•HILL COMPANY

File: W:\Projects\Fy2004\500-4\Closeou..
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